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THE MANAGEMENT OF IRREPARABLE CRUSHED EXTREMITIES.

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In this short paper I wish to call attention to a line of treatment I have resorted to in the management of this severe class of injuries, which, in my experience, has yielded results far superior to the usually accepted methods.

The impress of antiseptic and aseptic treatment of wounds has been sufficiently strong to largely stamp out one of the most baneful sequella of traumatic infectious diseases, namely, moist gangrene, yet in the face of the most painstaking antiseptic measures we do have the engraft of gangrene in a certain number of these injuries.

The puzzling question has been the adoption of methods and means of management that will eliminate the possibility of this complication.

The amount and character of the infectious material that is necessarily present to a greater or less degree in accidental wounds, the extent of devitilization of tissue and the individual resistance of the patient, are all factors that enter into the possibility of the onset of gangrene in this class of cases, and our inability to measure any of these conditions has tried the judgment of the most experienced to even suspect which case more than another is likely to the development of this destructive and often fatal process.

The onset of gangrene after amputation through apparently normal tissue with the practice of the most thorough antisepsis, has been the bane of surgeons. Concomitant with the demonstration of bacteria as the prime cause of the bad behavior of wounds, came the axiom of free drainage, the cardinal principle in accidental surgery.

Acting upon this principle, the open treatment of amputation in gangrenous extremities, followed by frequently changed hot moist aseptic or antiseptic dressing, has been the custom among experienced surgeons for a number of years.

This procedure, while a marked advance and resulting in a lessened mortality, is still far from ideal, in that, in a certain number of cases, the gangrenous process would attack the stump.

The purpose of this paper is the suggestion of the preventive method, a method that will reduce the possibilities of gangrene to a minimum.

Having lost several cases in my own practice by the spreading of the gangrenous process to the stump after secondary operation, it occurred to me to carry the open treatment of the stump a step further and practice it at the immediate or primary operation. I have now practiced this method in a number of cases recently without apparent tendency to gangrene and without death. The amputation is done, the flaps formed, not a suture is applied, but the stump left wide open.

A moist hot dressing of normal salt solution was applied to favor the most perfect drainage, the extremity elevated and put to rest upon a splint and the dressing changed once or twice in the twenty-four hours. To favor the retention of heat, the dressing was enveloped in oil of silk.

In a recent paper by Dr. Van Buren Knott of Sioux City, Iowa, he had resorted to a procedure in cases after gangrene has commenced, which has suggested to me, what, in my mind, is a further improvement in the management of these cases. I use Dr. Knott's own words:

The procedure is as follows: "Being confronted with a case of traumatic gangrene of an extremity, estimate as exactly as possible the line between the diseased and healthy soft parts, and having first, under anesthesia, made a most careful and complete disinfection and cleansing of the skin, puncturing all bullæ and removing all discharges, envelop the gangrenous area in a sterile towel up to the line selected, and at this point make a circular amputation, cutting through soft tissues and bone at the same level.

Ligate carefully all bleeding points, including none of the perivascular tissue in the bite of either forceps or ligature.

Leave the wound absolutely open, not introducing a single suture, and apply moist dressings of gauze saturated with salt solution, these dressings to be changed from two to four times in twenty-four hours, as the circumstances of the particular case demand."

I am satisfied that the application of this method at the primary amputation would reduce the liability to gangrene to a minimum, and hence the mortality to almost nil.

That during the dissecting up of flaps tends to lower the already devitalized tissue; that the use of sutures in the primary operation does, by tension, interfere with the blood supply and tend to tissue death and the sealing up of infectious material by the coaptation of flaps, favor the developement of a gangrenous process, seems to me cannot be rationally denied, and the verification of these facts have been borne out clinically by a few cases I will here briefly narrate.

Case 1.—W. H. L., a switchman for the Burlington Railroad, was admitted to the Ensworth Hospital May 15th, at 5 A. M., immediately after being run over by a switch engine, with both legs crushed at middle third. He was moderately shocked. Was given strychnine and morphine and atropine hypodermically, and heat applied by means of hot water

bags. Was sufficiently reacted to be taken to operating room at 8:30 A. M., three and one half hours after accident, where limbs were cleansed under anesthesia and amputated and flaps united. Was given 1 quart hot salt solution by rectum and removed to a hot bed. During the day he had 1-30 gr. of strychnine every four hours and morphine as needed to relieve pain.

May 17th, the second day after amputation, evidences of infection were manifested by mild delirium, extreme restlessness, intense pain when not relieved by morphine, frequent emesis and a temperature 101 3-5 and pulse 120.

May 18th, general condition bad, hiccough, stump moist, discolored, indolent, with a sero-sanguinous discharge, beginning gangrene.

Taken to operating room and double reamputation done through apparently healthy tissue right leg above knee and left through joint and flaps united. Stumps were wrapped in large rolls of gauze wrung from hot 1 per cent. carbolic acid and supported upon splints. Transfusion was done during operation. Following second amputation, patient's temperature 99, general condition became somewhat better, but pain continued unbearable without morphine until the 22d, when he suffered a slight hemorrhage from left stump. Examination showed a destructive process posteriorly extending along course of vessels yet popliteal was apparently intact.

The 23d, the stump was oozing, the cavity was irrigated and hot carbolic dressings continued. The 23d, evidences of sepsis were more pronounced, temperature 103, sweating increased, restlessness extreme and frequent emesis. There was no change in his condition further than a gradual failing of vitality until the morning of the 25th, when a free hemorrhage started, which was immediately controlled by compression and turniquet by the interne. He was taken to the operating room and the popliteal found to have been invaded by a localized gangrenous slough. Vessel was ligated, he was transfused, but was too much exhausted for the slight blood loss and the anesthesia, and died without reaction.

This is a brief clinical picture of death, eleven days after accident, from a slow sepsis. A sepsis that if not nipped at the primary operation develops a progressive tendency that refuses abatement in the face of active and constant attention, with heat, antiseptics and stimulation on the part of the surgeon and a good constitution on the part of the patient,

I felt at the time that this man should not have died, and I know now from a later experience with the management outlined in my paper, he would not, had he have had this treatment.

Case 2.—Chas. B., age thirty-six, freight hauler for Burlington railroad, June 14, 1903, attempted to board a moving street car while in an intoxicated condition, was thrown under, and wheels passed over left ankle. Upon his admission to the Ensworth Hospital shortly afterward, the limb was found to be irreparably crushed and limb was cleansed under anesthesia, amputation was done at upper part of lower third of leg with cuff flaps and dressed open with hot salt solution and placed at rest upon

a splint, with instruction to change dressing night and morning.

June 15th, hospital reports show patient, pulse 84, temperature 100, free from pain and in general good condition. His chart showed a convalescent history from day to day. June 20th, six days after injury and primary operation, the stump was sweet and of healthy appearance, the flaps were freshened and coapted by suture. Union took place primarily and he left the hospital June 30th, sixteen days after admission.

Case 3.—J. A., age thirty-six, driver of grocery wagon, admitted to the Ensworth Hospital December 11, 1903, at 8 P. M., after having been run into while driving across the tracks of the street railway company. Examination revealed an ankle crushed by wheel passing over it. He had but little shock, so was removed immediately to the table and limb cleansed for operation. The wound seemed so free from foreign material I could not refrain from doing a complete operation. Flaps were sutured and rubber drainage inserted in lower angle and a hot moist dressing applied and stump put to rest upon splint. December 12th, temperature 100, pulse 100, complaining of pain in the stump. Ordered morphine and atropine, and dressing changed. December 13th, sero-sanguinous discharge from drainage tube. Patient restless, temperature 101; gave castor oil and bromidin at bedtime, and dressings to be changed every four hours.

December 14th, had a bad night. Complains of stump, flaps look a little dark, discharging dirty amber-colored liquid, some odor, looks suspicious, removed all sutures and irrigated with very hot water for one hour and reapplied hot dressings. December 15th, patient slept all night, skin over-flaps had regained natural color, no odor to stump, has healthy appearance, temperature 99 degrees and pulse 90. Moist dressing was continued until December 22d, when he was taken to the operating room and flaps freshened and coapted and dressed dry, primary union took place, with the exception of small stitch abscess which detained patient until January 13th. The pain in this case for the first three days, with the bad behavior of stump, demonstrated to my mind the danger of closing up. Had we failed to reopen on the third day this case would certainly have developed a gangrenous stump with the necessity of a greater loss of limb from reamputation and possibly loss of life.

Case 4.—Mr. H., aged twenty-four. Track employe of the Burlington Railroad. Fell or was pushed from the car platform while passing from one coach to the other as the train was pulling out from station. He went down between coach and station platform and the wheels passed over both legs below the knee. First aid was rendered by a local physician and he was brought immediately to the Ensworth Hospital, a distance of forty miles. Upon admission some two hours after accident, he had fairly reacted from shock, so was taken directly to table. Disinfection and cleansing was carrid out under anesthesia and both limbs were amputated by circular method, cutting through soft tis-

sues and bone at same level, the left at lower third and right at upper third, at site of respective injuries.

Vessels were ligated, stumps wrapped in large moist hot gauze dressing covered with oil of silk and placed to rest upon posterior board splint and dressing ordered changed night and morning. He was given one quart of hot salt solution by rectum and removed to a heated bed.

Post operative reaction was prompt and good. His general condition continued good, was free from pain, temperature never exceeded 99 degrees, stumps remained sweet for the following six days, when he was taken to operating room and the classical circular amputation was made, by dissecting up the flaps already outlined and sawing the bone at the proper level. Primary union occurred with the exception of some stitch irritation in one stump.

Case 5.—Occupation unknown, aged thirty-two. In company with his pal, was beating his way from St. Joseph to Savannah, his home. Was upon the tender of a Burlington train. When nearing Savannah, he was discovered by the fireman and attempted to jump off, but lost his footing and went down between the tender and coach and the wheel went over left ankle and badly contused right foot. He crawled into Savannah, a distance of one mile, and was immediately brought into St. Joseph by train crew. He arrived at the Ensworth Hospital at 9 : 50, P. M. March 2d, without shock and was immediately removed to the operating table, was given whiskey, which he requested, also morphine, strychnine and atropine hypodermically and anesthesia begun. Limb was thoroughly cleansed, disinfected and amputated, all structure upon the same plane at the upper margin of traumatism. Was given salt solution by rectum, one quart, and dressed and put in hot bed as in previous case. He sustained fracture of the first and second metatarsal bones, contused foot was freely incised upon either side, drains inserted and placed upon perforated Levis splint, with hot dressing every twelve hours. His condition continued good for the following six days, his temperature never going above 100 4–5 degrees, which was the morning following operation.

March 8th, sixth day after accident, the stump was clean, sweet and healthy. He was taken to the table and cuff flaps dissected up and bone sawed at required point and put to rest upon board splint, with heavy dry dressing. Drains were removed from right foot, it was placed in plaster cast, with windows. Primary union took place and the stitches were removed upon the eighth day.

Case 6.—March 26th, J. W., aged forty. Section foreman for the Burlington Railroad was struck by freight engine, knocked from the track, the wheels passing over left foot at metatarsal joint, was conveyed immediately to the Ensworth Hospital. Foot was cleansed under anesthesia, a Chopart's amputation was done, preserving all of the skin except that of the toes, but removing the crushed muscles and tendons. Skin flaps were separated by iodoform gauze and hot salt solution dressing applied. At the end of the fourth day, the wound looked so well I decided to freshen and coapt the flaps with sutures, which could be

done without tension by reason of their good length. Moist hot dressing was continued. Upon the fifth day, evidences of flap necrosis were present. Stump began to pain him for the first time since injury. Sutures were removed and flaps separated and stump irrigated for one hour with hot salt solution and hot moist dressing reapplied. The entire flap sloughed off, but without extension into stump. The fact that the flaps showed no evidence of necrosis until their vitality was lowered by suture, argued to me that they were coapted too soon and before revitilization had completely taken place.

I believe if they had been undisturbed until the 7th to the 10th day we would have saved them. The stump in this case was skin grafted April 20th.

I make no claim to originality of idea, but merely apply at the primary operation a method, which Dr. Knott originated and applied after the onset of gangrene. My claim is that, its application primarily everts its application for gangrene, in that gangrene will seldom, if ever, occur.

The advantages in this method may be summed up as follows:

1. Its application within the bounds of safety, to patients too much shocked for any other surgical interference.
2. The exposure of a minimum area of raw surface for absorption from an infected site.
3. Drainage ideal in character.
4. The most favorable conditions possible for the revitilization of tissue devitilized by trauma.
5. By virtue of its simplicity, its application by practitioners who are not prepared by previous surgical experience to do a typical amputation without consulting authorities.

LA GRIPPE, OR INFLUENZA, AND ITS TREATMENT.

By R. B. Fewell, M. D., Ph. D., Montrose, Mo.

I shall endeavor to notice this subject only in a few of its phases that are of the most importance to the physician as he finds it in his daily work, instead of going into minute detail regarding this now well-known, prevalent and devastating disease.

By la grippe we mean the epidemic fever, characterized by a catarrhal inflammation of the air passages or the mucous membrane in general, and by nervous disturbances which may be profound, and, when so, are accompanied by extreme debility.

According to Conklin, since the sixteenth century repeated epidemics have appeared at irregular intervals, and have rapidly spread over large portions of the civilized world. It is maintained, however, by many authors, and perhaps correctly, that not a few of the epidemics described in the earlier medical writings, under such names as catarrhal fever, Italian fever, etc., were epidemics of true la grippe, or influenza.

Ely-Jelliffe, M. D., tells us that H. Fehr Von Koenigshoven, in the *Journal of Medical Science*, July, 1899, described a markedly virulent epidemic

which occurred in 1387, which was universal over the entire European country, and Fehr then mentions the interesting fact that it was then noted that, following the disease, there was a tendency to mental trouble, hypochondriasis, melancholia, depression and even suicide.

Since the great epidemic of 1847–48, in which more than one-fourth of the population of London and fully one-half that of Paris were afflicted, there have been no widespread or severe visitations of this disease, until the early part of 1879, and again in 1880. It then prevailed extensively throughout the United States and Canada. But the epidemic and its consequences which chiefly concern us is the epidemic begun in 1889 and 1890, after several years of comparative immunity. It had been the experience in former epidemics, in so far as medical literature affords us an insight into their history, that the disease raged for two or three years, abated and finally disappeared; but the history of the present invasion has been far from this. La grippe has been epidemic almost every year since 1890, in this country at least, and if we refer to the English writers the same condition prevails in other countries. An editorial writer of Europe says: "This is the tenth consecutive winter during which epidemic influenza has prevailed in Great Britain, after a period of immunity which had lasted nearly forty years. You will remember it was hoped at the beginning of this invasion, that after prevailing for one, two or, at most, three years, the epidemic would pass away, as had been observed on previous occasions, but this has not been the case, and we have had annual recurrences. Though not so extensive as the first two years, still they have been sufficiently widespread to cause very serious inconvenience, and on many occasions a very distinct increase in the death rate, and, as is generally believed, to be a notable factor in a great number of chronic maladies, especially so of the nervous system, which are characteristic of the present generation."

The histories of the various epidemics prove clearly that the disease is not in any way connected with climate, soil, elevation or any known surrounding cause. The phenomena of epidemic influenza or grip are comprehensible only upon the theory of a specific infecting virus or germ as its exciting cause. Its rapid diffusion, sweeping over entire continents in a few weeks, affecting nearly the entire population in certain districts, irrespective of age, sex or condition, within a few hours after its first appearance, indicate some powerful morbific agent in the atmosphere, which acts specifically on the respiratory organs and the nervous system.

Seiford and others have described a peculiar micrococcus found in the expectoration of patients suffering from influenza, to which they attributed the development of the disease. But to Cannon Pfeiffer has been accredited the honor of settling the question as to whether influenza was due to a special baccillus or no, and now, I believe, it is generally conceded that the Cannon Pfeiffer baccillus is the cause of influenza.

The question has been propounded, "Is there an influenza proper, due to

a specific germ, the Cannon Pfeiffer bacillus, the toxine of which so profoundly affects the nerve centers and vital forces, as does the toxine of the Clebs-Loeffler in true diphtheria? Is there a pseudo influenza, or grip, such as the ordinary influenzal cold, or catarrhal fever, comparatively harmless to the vital centers, due to a mixed infection from which the specific germ is absent, and which bears the same relation to true influenza that pseudo diphtheria does to true diphtheria?

"If this question be answered in the affirmative by the pathologist, as now seems probable, then the bacterial diagnosis of influenza will be second in importance to that of diphtheria, and it is to be hoped that there will be some ready method of detecting it discovered and its treatment followed by as good results."

A disease of such grave manifestations, that often leaves an impress on its victims for years after; that often fatally complicates so many other maladies as to increase the percentage of the general death rate to such an extent, especially in cases of previous poor health and those past middle age—such effects have been attributed to influenza. Now, if this be true, the subject deserves at our hands a very careful consideration, and its early recognition and proper treatment must obviously be of vast importance.

Influenza is generally acknowledged to be highly infectious and contagious, and should be treated as such. It may begin abruptly, or be preceded for a few days by a feeling of indisposition or general malaise. A well-marked chill or chilliness, alternating with flushing and heat, may mark the onset to an attack, closely followed by a general congestion or hyperæmia of the mucous membrane of the nose and throat. Paroxysms of sneezing, and sometimes epistaxis, coughing, hard or rasping at first, growing more aggravated and distressing at night. Eyes injected and watery; nares irritated, and presently secrete an abundance of mucus. Throat sore, voice hoarse and a general feeling of malaise, rising temperature, varying in intensity according to the severity of the case, sometimes, where complications are present, which is not at all uncommon, rising from 104 degrees to 106 degrees F. Pulse exaggerated in frequency and changeable in quality and rhythm. Headache; pains of more or less severity in the muscles of the neck, back or limbs. The cough at first is harsh or rasping, with but little expectoration, but the expectoration becomes more abundant as the disease progresses, and may contain streaks of blood. Sharp pains in the chest or sides, with difficult breathing, may at times be experienced, and yet there may be no recognizable pulmonary lesions.

The catarrhal symptoms, which were so prominent in the beginning of the disease, may begin to subside or decline about the third or fourth day, and in mild and uncomplicated cases the patient soon be seemingly or actually restored to health and leave no trace of impaired constitution behind. These cases are fortunate, but it is the more unfortunate cases, or those aggravated cases that have not done well, to which we wish more especially to give our attention. The

more important complications of la grippe are those arising from the characteristic lesions of the respiratory tract, such as as laryngitis, capillary bronchitis and catarrhal pneumonia, which in reality are the extension and exaggeration of the ordinary primary lesions. Many intercurrent or pre-existing maladies are gravely affected by la grippe, among which may be mentioned phthisis, emphysema and diseases of the heart, kidneys and nervous system. The nervous symptoms are always decided in la grippe, such as severe pain in the eyeballs, headache and a general neurasthenia, as well as a cutaneous hyperæsthesia of the head and neck. Patients from the beginning of their illness are weak, and show extreme loss of muscular strength and great loss of vital force. Therefore, any pre-existing organic lesion may be very decidedly unfavorably influenced by la grippe.

Treatment: In the mild and uncomplicated cases I usually prescribe stay in doors, laxatives to keep the bowels open, salol, quin. sulph. and strychnine. For cough, heroine hydrochloride, acidi hydrochloric dil. syr. pruni codeine; refrigerating drinks, an occasinal opiate for pain and to relieve nervous tension, and such hygienic measures as are indicated in any acute infectious disease.

In the more aggravated cases have them stay in bed, regulate bowels, take a bath, have them use a nasal douche of warm water with little chloride sodium or soda bicarb. to cleanse the mucous membrane, then have them use a spray composed of menthol, eucalyptol and liqd. olephene; may use listerene or glycothymoline.

Give quin., iron and strychnine as a tonic. Take heroin, either in tablet form or elix. heroin comp. Syr. codeine comp. may be given. Give refrigerating drinks, stimulants. Support heart by fld. ext. digitalis or Da-Costa's tablet.

All depressing remedies and measures should be carefully avoided, since the nature of the disease is so devitalizing upon both the mental and physical system. I watch my cases carefully for complications involving the heart and lungs, which are apt to occur, since most of the deaths have resulted from such complications, and the fatality has been considerable.

INFLAMMATION AND SUPPURATION OF THE FRONTAL SINUSES.

By T. E. Potter, M. D., St. Joseph, Mo.

One of the most interesting subjects with which surgeons and physicians have to deal, is inflammation and suppuration of the frontal sinuses. This trouble is much more frequent than is generally supposed.

The frontal sinuses are two cavities, varying in size and shape, situated to the right and left of a median line and anterior to the ethmoidal notch. They are lined with mucous membrane, reflected up from the mucous membrane of the nose, through a canal, on each side, known as an in-

fundibulum; and through variable ethmoidal cells situated at the base of the internal ends of their cavities.

This mucous membrane resembles the mucous membrane lining the antrum of Highmore, but is thinner, and is covered with columnar ciliated epithelium which waves constantly toward the exits as all cilia do. It is easily detached. These canals are very small in children, and are not fully developed until after the period of puberty. The larger and more prominent the supercilliary ridges, the greater the size of these sinuses. The upper and anterior osseous portion is the thickest and strongest, while the posterior and lower portion is thin. At the internal lateral portion we have the thin and delicate lachrymal bone, which sometimes is not completely osseous, but where it unites with the frontal, the suture is fibrinous. Each sinus has an ostium frontale, through which the contents of the sinus passes through the infundibulum into the middle meatus of the nose. On same side the anterior ethmoidal cells also have openings that are called ostia. These sinuses generally have a septum which divides them. There is occasionally an anomalous condition met with in which there is no septum, but a direct communication between the two.

From the peculiar arrangement of the anterior ethmoidal cells, and the ostium frontale, any disturbance, especially of an inflammatory character, may cause stenosis of the exit, and prevent the free discharge of mucous and effusions as they form in these cavities.

It is often difficult to trace the causes of imflammation of these sinuses. When it comes from an injury, we readily understand the origin of the trouble, but as to how the different bacteria get into these cavities, is not so easily accounted for, but they are always there under such conditions. Dr. A. Howard Lothrop says "that sinus affections accompany or follow acute infection or suppurative diseases, with any degree of frequency, is a comparatively recent discovery, but this conclusion is demonstrated by recent bacteriological and pathological examinations at autopsy." It has been observed that troubles of the frontal sinuses in adults have been a sequel of pneumonia, influenza, cerebro-spinal meningitis, erysipelas, typhoid fever, peritonitis and smallpox. Syphilis may invade these sinuses, but there is only slight evidence that tuberculosis has been the primary cause.

We also have malignancy and new growths affecting these sinuses. The pathological conditions are very much like those affecting other parts lined by mucous membrane; and, if there is free escape of fluids secreted by the mucous glands and of the infiltration, we soon have a ready and happy resolution taking place; but, on the contrary, if this does not occur we have conditions that destroy health and threaten life. The symptoms of inflammation of sinuses are local and general. The local are the most important, and are the ones upon which we most rely. They are subjective and objective.

Pain as a subjective symptom is important, and from the extensive œdematous condition which exists, and the not giving way of the osseous canal, the pressure is great and the

nerve filaments suffer. The frontal headache, that is not relieved hy quinine or any of the coal tar preparations, is characteristic of this inflammation, also the bursting feeling that occurs at the lowering of the head; the distress between the eyes is sometimes very great and is not particularly referred to the supra-orbital nerve. Then this distress will suddenly disappear, when there is a free discharge from the nose, which is caused by the opening up of the ostium frontale and the passage of fluids through the infundibulum into the nasal cavity. The pain may produce dizziness, and frequently the patient complains of flashes of light before the eyes.

Tenderness is a valuable symptom, and pressure or tapping over the sinus will often cause suffering, the inside of the orbit may become very sensitive.

The sense of smell will often be materially interfered with. This is often observed in even the mildest forms. The constitutional symptoms may be rigors with fever, which are only relieved by an evacuation of the sinuses.

Objective symptoms are as follows: An accummulation of pus is found in the middle meatus, where the infundibulum makes its entrance into the nasal cavity. There will be crusts forming here, and, on awaking in the morning, the patient is compelled to cleanse the nose, either through the external nares or posterior nares. There is frequently an edematous condition of the eyelid and the eye on the side effected will be smaller than the eye on the other side. In chronic cases of empyema a fistula is sometimes formed, and there may be, at the corner of the eye, a mucocele or a pneumocele where there has been gas or air entering the tumor; there may be also some chronic condition of the lachrymal sac and nasal duct, that has become infected from a fistula from the sinus. A fistula may open back at the extreme internal posterior portion of the sinus and cause an abscess within the orbit, disfiguring as well as damaging the eye. In empyema of the frontal sinus the pus is liable to peptonize through any of the osseous structure, and if it goes through the posterior wall it will produce a meningitis or cerebral disturbance which will soon end the life of the patient. Auscultation will give some pain. Inflammation of accessory sinuses often occurs. The antrum of Highmore is liable to become affected in connection with suppuration of the frontal sinus.

Trans-illumination is not of service. The prognosis of acute cases is most generally favorable; we might say a large majority of them recover. But an acute case may become chronic, and while life is not endangered, the patient's health may be materially injured by the occurrence of a fistula and a wretched purulent discharge constantly from the nose, may cause the most unending and distressing annoyance. Once a diagnosis is made, the treatment is very interesting; and I am, indeed, sorry that our twenty minutes' limit will not permit me to discuss it as I should like to do.

In acute stages, when the different ostia, say the ostium frontale and the smaller ostia of the various ethmoidal cells are occluded on account of the thickening of the mucous membrane,

the object is to relieve as quickly as possible the distress occasioned by fluid confined in inflamed cavities, such as these sinuses are. In order to do this the treatment should be directed to the parts with as much activity as the circumstances will permit. We have these acute conditions frequently occurring in la grippe and hay fever. Very hot applications over the glabella and supercilliary ridges may be extremely beneficial. The local application of a 4 per cent. solution of cocaine to region known as the hiatus semilunaris and to the bulla of the middle turbinated bone will reduce the swelling of the inflamed and erected tissue and allow the different ostia to open, so that free drainage can take place. This cocaine should be applied upon a pledget of cotton. We have also obtained most valuable results from the local application of the adrenaline chloride, and this remedy is much more satisfactory than cocaine, for its results, while not so positive, are more lasting, and it does not excite the patient. Then the danger of establishing the cocaine habit should always be taken into consideration when a physician commences the use of this drug in the nose.

Warm douches of the normal salt solution are of service. A little Scotch snuff will many times stimulate the opening of these ostia. Menthol inhalations will often give relief when the trouble is not too violent. The fever which generally accompanies these acute attacks should be kept under control by the use of quinine and the coal tar preparations and free purgation. The chronic form, where an empyemic condition has been established, is certainly the most interesting. A fistula may exist, causing a discharge near the internal canthus of the eye or an abscess in the orbit, or, as I have seen, an abscess may occur high up on the forehead; again, the ostium frontale may be open, and the ethmoidal cells very much diseased. When this is the case a resort to surgical interference is an absolute necessity. To establish free drainage through the nose by probing up through it is a very fascinating idea, but a most difficult one to accomplish. No operator can say with absolute certainty that his probe is in the sinuses, even if he has removed, before undertaking the probing, the operculum of the middle turbinated bone. He may only be in an ethmoidal cell.

Dr. Howard A. Lothrop, of Boston, in the *Annals of Surgery*, February 18, 1899, page 181, says: "During life it is impossible to decide where the point of the probe may lie, and on the cadaver the uncertainty is nearly as great." This blind method of treatment impresses me as liable to do damage to the ethmoid bone, cells and skull, without any benefit, excepting of a temporary nature. While we do not condemn the attempt in a general way, we do not by any means advise it. Another reason is that there is no certainty as to the anatomical arrangement. If the ostium frontale is open, which is many times the case in a large majority of empyemic conditions of the frontal sinuses, a warm salt water douche is valuable, also keeping the nose well cleansed. Fine results have followed the use of heavy doses of iodide of potassium, in milk, three times a day. I have used very satisfactorily, in cases

where the nose was not too sensitive, the following prescription:

℞ Pulv. sanguinarium .....60 grs.
Pulv. camphor..... 4 grs.
Borax .....10 grs.

Mix. Have patient to use as a snuff twice a day.

The external operation is, in my judgment, the only operation that will cure. Shave off eyebrows, if both sides are affected, make an incision through the soft parts along supercillary ridge and turn down and up a flap; the osseous portion can be readily opened with a chisel; this opening should begin in the bone internal to the supra orbital notch; the moment the osseous structure is cut away the mucous membrane bulges up past the surface of the bone. Then open the mucous canal freely as large as the osseous opening, when the fluid will escape. In making the opening in the bone care should be taken not to fracture the orbital plate and to avoid breaking off the pulley that retains the tendon of the superior oblique muscle. An opening can now be easily made into the bone by taking a pair of pointed hæmostats and pushing them downward, a little backward and inward into the middle meatus of the nose. A small rubber drainage tube should be inserted through the opening, making its exit at the external nares. This will drain the sinus. The flaps can be closed in three or four days if the physician prefers to wait sufficiently long to be sure that drainage is perfect. Through this tube the sinus can be irrigated with an antiseptic solution. Before inserting the drainage tube the canal should be curetted out, and not only this, but I have found the application to the external portion of the canal of the pure chloride of zinc valuable because it destroys the unhealthy condition of the mucous membrane. After this is done the cavity should be cleansed out well, then packed with iodiform gauze for three or four days before closing the flesh wound. The physician should examine as thoroughly as possible the conditions of the ethmoidal cells.

OUR RELATION TO ONE ANOTHER.

By John M. Kennedy, M. D.

The practice of medicine, being the application of knowledge to the prevention, cure and alleviation of disease, is easily the first of all callings. Its successful application lengthens human existence, diminishes human suffering, and increases human happiness. The past is dead and gone forever; the future is something we know naught of; so let us do today, in the ever-present now, our duty to humanity and to one another.

The members of the medical profession seem to be a class set apart. They have the distinctive title of doctor, although it is applied sometimes to those who have achieved distinction in other work. It is, however, in the vernacular, the title of the physician. We are colleagues, confreres, engaged in the world's greatest work; and it is well to understand our relation to one another. The Golden Rule, given by the first

of all teachers, the Great Physician, would seem to cover the ethics of the situation: "Therefore, all things whatsoever ye would that men should do to you, do ye even so to them;" or, as the next great teacher, second only to the Divine One, has it: "This, above all, to thine own self be true, and it must follow, as the night the day, thou canst not then be false to any man."

It is peculiarly graceful and proper for those younger in the profession to ask and receive counsel and assistance from those older and more experienced. On the other hand, it is eminently proper for those fresh from the centers of medical learning, who have had the advantage of witnessing the technic and seeing the work of the great leaders of the profession, to give of their more recent and up-to-date knowledge, both in private and in a medical society, to those who have not had this advantage—avoiding, however, the egoism of young Doctor Know-It-All and the presumption of the immature specialist.

It is certainly an important duty we owe to one another to meet in the medical society, there to give and take as opportunity offers.

I would commend for careful consideration the principles of medical ethics adopted by the American Medical Association in lieu of its former code of ethics. I think it would be to our advantage, and would assist to keep up good-fellowship and the solidarity of the profession, if every one would read carefully these principles at least once a year, and particularly Chapter II.

It is a common thing for outsiders, the laity so called, to speak to one physician disparagingly of another, evidently thinking that such remarks are pleasing to the one addressed. This, I think, we may in a great measure suppress by showing that such remarks are displeasing, and that we do not consider it complimentary to be elevated by the pulling down of another. Always speak well of a worthy colleague when it can be done with a proper regard for truth and honor—avoiding, however, that most contemptible of all ways of speaking of another, "damning with faint praise."

There is a certain etiquette of consultations, a knowledge of which facilitates business and brings out more fully a free expression of opinion. When three or more physicians are in consultation (and here let me emphasize that it is exceedingly discourteous to fail to be prompt at the time appointed for the consultation), the attending physician is in the attitude of chairman. He should arrange for a full and complete examination of the patient by the others. He should give the history, diagnosis, prognosis and treatment of the case up to that time. He (the attending physician, or chairman of the consultation, as he may appropriately be called), after learning that all have finished investigation of the case to their entire satisfaction, should now call on the youngest member of the consultants to give his opinion, and then call on the other members in succession according to priority in the profession. All having expressed themselves, including the chairman, and a general discussion having been indulged in to the

fullest and freest extent, it is in the province of the chairman to announce the diagnosis accepted by the consultation, and to outline or state specifically the treatment agreed upon, and also to state the prognosis. All this is evidently necessary in the interest of harmony and for the good of the patient. If this is done to the expressed satisfaction of all present, the consultation is dissolved, and the consultants have no further connection with the case. If, however, the consultants do not agree, and a mutually satisfactory compromise in the interest of the patient cannot be reached, it is the privilege and duty of the dissenting member or members to withdraw from the consultation.

There is one word which covers this whole matter, a guide which points unerringly the correct way under all circumstances; which stands out bright and beautiful as the morning star. That word is Ethics, a word loved by all true members of our profession.

Ethics is duty! Ethics is moral conduct! Ethics is that force which smooths the rough places of life; it is the oil of gladness; the perfume of social intercourse. Ethics is harmony; by ethics is the universe upheld, and suns and stars are guided in their course. Ethics is power and honor, justice, goodness and truth. Ethics is the mailed hand that rights every wrong, that brings order out of disorder, that conquers chaos. Ethics is the voice of the Lord God Omnipotent calling the wayward sons and daughters of earth back to the Father's house. Ethics, properly applied, is paradise regained. Ethics is peace, good will to men. Ethics is God incarnate saying to the waves of trouble and sorrow that threaten to engulf helpless humanity: "Peace; be still!" Without ethics, life would be a burden, and the question, "Is life worth living?" would indeed be pertinent.

Therefore, O ye sons of Hippocrates, be good! Be pure! Be kind and gentle! Be honest and fearless! And it must follow, as the day the night; as sure as right is better than wrong; as sure as strength is better than weakness; as sure as health is better than sickness; as sure as joy is better than sorrow—so sure will you be ethical.—*New York Medical Journal.*

HOW TO CURE, BY A NOVEL METHOD, HOPELESS CASES OF DEAFNESS AND DISCHARGE FROM THE EAR.

By Robert Barclay, A. M., M. D., St. Louis, Mo.

Mr. President and Gentlemen:—Searching, in my limited and somewhat unpopular field, for something that might prove of interest to you all, it occurred to me that it might be well, upon this occasion, to call your attention to a rather novel method of affording relief to a large class of cases popularly deemed hopelessly incurable.

I am encouraged to believe that this will be of real practical service to you, more especially for the following reason:

The Code of Ethics of the American Medical Association, which, for fifty-four years past, has served the members of this association "as the standard by which to regulate their intercourse with each other, with their patients, and with the community at large," explicitly declares * that "A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, etc. . . . . To decline attendance under such circumstances would be sacrificing to fanciful delicacy and mistaken liberality that moral duty which is independent of, and far superior to, all pecuniary consideration." Desertion or abandonment of such a case is still further discountenanced by the declaration † that "Consultations should be promoted in difficult and protracted cases, as they give rise to confidence, energy, and more enlarged views of practice." Furthermore, a cogent reason why such patient should not be turned helplessly adrift by his own regular medical attendant is found in the further declaration ‡ that "A patient should also confide the care of himself and family, as much as possible, to one physician; for a medical man who has become acquainted with the peculiarities of constitutions, habits and predispositions of those he attends, is more likely to be successful in his treatment than one who does not possess that knowledge." That such patient should be given the benefit of this principle by his own physician invoking the aid of counsel, rather than that he should be discarded without, our Code emphasizes by the statement, § "It is of great importance that physicians act in concert." ‖

May I not, then, presume upon your interest, fortified thus in the opinion, first, that cases "popularly deemed hopelessly incurable" should not thus be abandoned by their own doctor; not cast adrift by them, to determine for themselves the question of appropriateness to their condition of any remedy whatsoever, plausibly suggested by a strange medical adviser, or his qualifications for administering, if desirable, said remedy in a thoroughly efficient manner; and, second, that such patients should not be left, in their desperation, a prey to the advertising quack, the proprietary medicine man, and the vendor of mechanical frauds for the alleged relief of the afflicted. Urging upon you, rather, in every individual case, the solemn obligation of remaining your patient's constant medical attendant, personally assuring yourself that a remedy suggested is appropriate to his condition; that the advocate of such procedure, or some other individual recommended is competent, by experience, satisfactorily to effect it; prepared to see that he does so, without his taking undue advantage of your patient—does his whole duty to your patient; willing and prepared to afford all possible advice and as-

* ARTICLE I.—*Duties of Physicians to Their Patients.* SEC. 5.

† *Ibid,* SEC. 6.

‡ ARTICLE II.—*Obligations of Patients to Their Physicians.* SEC. 3.

§ *Ibid,* SEC. 7.

‖ *Read* "NEVER TURN YOUR CASES OVER TO 'SPECIALISTS.'" By Robert Barclay, A. M., M. D., in *St. Louis Medical Review,* July 20, 1895.

sistance to your consultant in this matter; and remaining with your patient as his medical adviser and guardian to the last—active and jealous always of his best interests ¶—let me turn directly to my subject.

The method of treatment under consideration is one, recently developed along rational lines, for the radical relief of the condition underlying the symptoms of so-called "catarrhal deafness" and of "running ear," or "ear discharge," in cases which, after having resisted the curative influence of ordinary remedies at the hands of presumably qualified practitioners, for years and years, have at last been abandoned as hopelessly incurable.

These cases are those where, on the one hand, every effort has been made to guard the patient from changes of temperature and moisture, to improve his hygienic surroundings, regulate his diet and improve the general health and tone of the system; where, when hypertrophy and hyperæmia of the mucous membrane, and closure of the Eustachian tube, have played the principal part, general treatment has been supplemented by judicious use of the Politzer bag and Eustachian catheter, and suitable local treatment of the nasal and naso-pharyngeal catarrh.

These are cases, where on the other hand, the patient, for months and years, going perhaps from physician to physician, has faithfully submitted to the prescribed treatment—such as "syringing, astringent, caustic and antiseptic application; the insufflation of powders; the application of electricity; the inflation and stimulation of the middle ear by means of air or vapors passed through the Eustachian tube; or treatment of the throat."

Cases where measures such as these have been faithfully and intelligently carried out, ofttimes for years and years, and are found at last to be all in vain—these are the cases that I have referred to as "popularly deemed hopelessly incurable," for a large class of which I would suggest a remedy.

It is not my purpose, upon this occasion, to recite the details of my personal experience with this remedy; but rather to ask your attention to a brief discussion of the fundamental surgical principles upon which it is based; more especially such as have been most strongly impressed upon me by experience. And I would add thereto, a description of what seems to be, a simple, sure and ready method of recognizing, off-hand, amongst apparently hopeless incurables—particularly when victims of chronic "catarrh"—those which can probably be relieved, at once and permanently, by this remedy. I beg to remark, in passing, that this test differs from the usual technical tests of hearing. It requires the use of no apparatus, no special instruction, nor any preparation, whatsoever, for its proper and instant application. Having once heard it plainly stated, any of you, or even a layman, can apply it; at any time, as a rule; and under any circumstances that admit of apparently casual conversation with the patient. Furthermore, the facts may be elicited—the test virtually made, in the course of such conversation,

¶ *Read* "Fair Play for the Doctor that Recommends the 'Specialist:' A Hint to Both." By Robert Barclay, A. M., M. D., in *St. Louis Medical Review*, March 4, 1899.

without the patient's even suspecting its import.

Surely, no modern physician need be ashamed to number this among his many practical attainments. Of the cases of which I speak today, the most distressing symptoms are mainly those of deafness, discharge from the ear, habitual low-speaking voice, dizziness, better hearing in a noise (hearing worse in quiet places) and aural distress, a feeling of tension or pain.

Now, some of these symptoms are common both to catarrhal and to purulent inflammation of the ear-drum, arising, as they do, from *a mechanical condition of altered tension and mobility in the auditory conducting mechanism*—or transmitting structures of the middle-ear, and their appendages—*lying between the external auditory canal, without, and the labyrinthine nervous apparatus within;—a condition that disturbs labyrinthine tension*, and *acts as an obstacle to the normal transmission of the force of sound-waves, to and from a functionally active labyrinth and auditory nerve*, within;—a condition attended with chronic progressive deafness, dizziness, noises in the head and ears, habitual low-speaking voice, better hearing in a noise (worse hearing in quiet places), aural distress—one, several or all of these symptoms.

Whether this condition obtains in catarrhal or in purulent inflammation of the ear is immaterial, for *the same principle guides us* in either case, in our effort to relieve its symptoms—and that principle is to *eliminate this condition*. To do this, along rational lines, so as to accomplish radical results, the method of treatment has recently been developed, step by step, whereby we *effect the liberation of the deeper portion of the auditory conducting mechanism, still movable, from the permanently immobilized portion, without;* with *provision for natural drainage*, and *for entrance of ærial sound waves directly to the deeper*, still movable portion of the auditory conducting mechanism.

An *additional feature*, however, presents, *in the case of discharge from the ear*, or active purulent inflammation of the ear drum; for here we have *not only* to correct abnormal tension and mobility of the conducting mechanism, *but to put a stop to an actively destructive and infective process*,—the *problem here* being specially *to establish free drainage, remove diseased products, quiet irritation, sustain and reenforce vitality* and *keep the infected parts clean and disinfected*. Where this cannot be accomplished by medicinal means, mechanical interference, preferably by surgical procedure, seems indispensable to effect the desired end; the details of the operation varying with the peculiar physical conditions met with in each individual case presenting. The general experience being that the procedure demanded most frequently is *the division of adhesions and new tissue* and *excision of the remains of the drum-head with the hammer and anvil bones, liberating the stirrup bone*, since, in the majority of such cases of discharging ear, *symptoms persist because of adhesions, or the presence of new tissue, suppuration continuing because of the involvement of the inaccessible spaces and pockets formed* by these parts and the outer wall of the attic of the drum-cavity, done away with by this operation.

In *catarrhal cases*, however, it is the *changes in the mucous membrane*, covering all parts of the *auditory conducting mechanism* in the ear drum, and *their physical consequences*, that most closely concern us; and, in fact, that these *progressive tissue changes, attended with gradual change of tension in the parts*, so affect *labyrinthine tension* as finally to disturb the function of the auditory nerve and, if neglected, *lead to loss of hearing in the ear of the opposite side as well;* for the auditory nerve center of each ear supplies branches to the opposite ear. Consequently, we are called upon, here, to consider the interests not only of the one ear, but also of its fellow of the opposite side; since it has been proved, by experience, that the hearing of the second ear may ofttimes be saved by measures which reduce the tension in the first ear, even where the latter may be in a condition admitting of little hope of our restoring its own original hearing. In short, the condition of tension demands consideration, as well as does that of mobility of the conducting mechanism.

Now, when these changes in the mucous membrane, and their physical consequences, have passed beyond the functional stage, and organic structural changes have been established, the problem of relief depends wholly upon the possibility of so acting upon these new physical conditions as to liberate the essential conducting mechanism of the ear. Where hygienic, medicinal and simple mechanical measures fail to effect this, surgical procedure may serve to release the conducting mechanism from its bonds —very limited encroachment only upon the affected parts of the ear-drum, frequently, being all that is necessary to afford relief, particularly in those cases where the tissue changes have confined themselves to a small spot. In other cases, the changes will have involved so large a portion of the conducting mechanism that they cannot be liberated sufficiently to act, entire, as a conductor, normally; but must, when present, ever act as an obstacle to the passage, inwards and outwards, of sound-waves. In such cases, there is but one rational method of procedure; and that is, to liberate the deeper portion of the auditory conducting mechanism, still movable, from the permanently immobilized portion, without; making provision for free entrance of aerial sound-waves from without directly to the deeper, still movable portion and the labyrinthine nervous apparatus, within; while providing for the exit of sound-waves normally seeking exit through the tissues of the head and ear. The appropriate details of such surgical procedure are peculiar to each individual case, and are to be estimated and put into execution, modified in detail, step by step, as the surgical and anatomical conditions confronting the operator may indicate, throughout; the best guide being the judgment of the operator—it being assumed, of course, that the case is in the hands of one practically familiar with the surgical anatomy and the physiology of the ear, and thoroughly skilled in such difficult, deep, aural surgery. In my own experience, the form of operation most frequently indicated in the old hopeless cases, has been that affecting the removal

of the drum-head, hammer and anvil-bones—the stirrup-bone, also, being occasionally removed; and bands, synechiae, septa, growths, etc., dealt with, as indicated, sufficiently to liberate and expose the more deeply lying auditory structures. This not only eliminates the defects of drainage by the natural route, in the cases of discharge from the ear; but in the "catarrhal" ones, so exposes the mucous membrane of the drum-cavity, that it undergoes a progressive skin-like or dermoid transformation, with disappearance of the mucous gland as such.

The beautifully constructed, delicate aural surgical instruments of the present day, together with the visual and manual dexterity of the expert specialist—essentials of perfect surgical technique—ensure rapid, accurate and thorough operation. Extreme care is today exercised, both during its performance and afterwards, to avoid any manipulation or procedure whatever that might, even in the least degree, tend to injure or irritate the remaining structures of the drum-cavity. Careful attention is today given to the diet and general condition of the patient. In short, every precaution is taken towards simplifying the operation of today, so far that secondary inflammation is unlooked for, and a reformation of membrane—the so-called "substitutive drum-head"—at the site of the normal drum-head, is exceptional. And even when such membrane actually does form, it is readily removable under local anesthesia, and is eventually disposed of thus, either with or without the application of traumaticin, containing a little salicylic acid, and by restricting the patient's diet for a variable period.

Three things are especially to be borne in mind in regard to this novel method of treating these hopeless cases of deafness and of discharge from the ear:

I.—As soon as it is evident that ordinary and time-worn methods are powerless to cure, this one should be resorted to—and without unnecessary delay—as neglect to remove the obstacle in the auditory conducting mechanism only keeps the more deeply lying parts the longer without exercise of their normal functions, affects the tension of the labyrinth, and in so far tends to impair them, as well as to involve the function of the opposite ear. For the sake of the other ear, even if there be hope of but slight benefit to the hearing of the first ear, this method should be employed.

II.—In all cases of obstinate discharge from the ear, from purulent inflammation of the drum-cavity, where treatment by ordinary methods has proved futile, whether or not the mastoid cells have already become involved, this procedure should be resorted to, inasmuch as it alone usually suffices to effect a cure—whereas, without this, even mastoid operation alone is at best an illogical, imperfect and hazardous resource, mentioned here only to be unqualifiedly condemned.

III.—Where inflammation of the drum-cavity has been attended by an immobilization of the outer portion of the auditory conducting mechanism, whether from fixation or from increased inertia, low-pitched sounds are the more difficult of transmission

to the auditory nerve. Likewise, sound waves generated within the patient's own head—whether by chewing, talking, singing, by the pulsation of the auditory or their neighboring blood vessels, or by the friction of the blood current upon the vessel walls—sound waves, generated thus within the patient's own head, normally seeking exit by transmission through the tissues of the head and ear, meet with obstruction on reaching the immobilized portion of the auditory conducting mechanism, and are reflected inward by it, thus agitating the more deeply lying and still movable parts of the conducting mechanism—giving the patient the same impression as if these sounds had come inwards from a point without, and beyond the movable portion, thus practically producing an echo in his own auditory conducting mechanism. Consequently, he is troubled with so-called "head noises," "death bells," etc. In this way, also, the sound of his own voice, especially, appears to him increased in force and volume by this echo in his auditory conducting mechanism, and impinges so strongly upon his auditory nerve as to deceive him as to the actual volume of his voice. He thereupon lowers the tone of his voice, always augmented by the echo in his ear, until it seems of normal volume, so far as he himself can determine. Consequently, he speaks habitually in an abnormally moderated or low tone of voice.

In a quiet place, such a patient usually hears worse. Whereas, when in a noisy place—as, for example, in a moving street car, or in a noisy machine shop—he will usually find that he can, while there, hear speech and other sounds much better. This is because the constant noise shakes loose that portion of his auditory conducting mechanism that elsewhere is more immobilized by abnormal tension, and the transmission of other sounds to the deeper, still movable, and the perceptive parts of the ear is, in the noisy place, thus rendered more easy.

If, therefore, among hopeless cases of deafness—particularly if they be victims of so-called aural "catarrh"—you happen to meet one who speaks habitually in an abnormally moderated or low tone of voice, inquire whether or not he can hear better when in a noisy place. By the exercise of ordinary tact, any one can secure, without impertinence, information upon this point sufficient to arrive, off-hand, at some approximately correct conclusion as to the nature of the condition underlying the deafness, and whether or not it be such as might probably be relieved by this operation.

As an example of the information usually to be elicited upon this point, from such cases, I recall one where, when the street car was quietly stationary, the conversation of anyone sitting alongside was heard with difficulty by the patient; while, on the other hand, when the car was in motion, noisily, of course, the hearing was so acute that the conversation of couples sometimes as far as six seats distant was very readily heard—upon some occasions, the patient stated, where the character of the conversation was evidently such that the speakers would, consciously, certainly not have allowed it to be overheard

by others; and there actually were others seated between the patient and the speakers, even in the seat next in front of the speakers.

Remember, then, the test, which, in my introduction, was praised with such ferver, and which I would so earnestly urge you to apply and verify in your daily social intercourse and practice. It is this:

Whenever you meet any deaf person, especially if most deaf to low-pitched tones, who speaks habitually in an abnormally moderated or low tone of voice, yet who can hear better in a noise or noisy place—especially if he—or she—be a victim of chronic "middle-ear catarrh"—be confident that you have encountered a case of immobilization of the outer portion of the auditory conducting mechanism, probably susceptible of relief by tympanic resection, and seize the present opportunity to encourage such a one to submit himself for thorough technical examination, with a reasonable hope of prompt and permanent relief of his disability.

For my experience has been that *any very deaf person who speaks habitually in an abnormally moderated or low tone of voice, who hears better in a noise or noisy place—no matter how long he may already have been afflicted, and notwithstanding that every other remedial measure may have been tried in vain —may yet be relieved, proportionately to the distinctness of these symptoms, by resection of the auditory conducting mechanism.*

As an indication of what might be expected of this operation, I would remark that I have seen case after case, over and over, which had been afflicted with discharge from the ear for a period, preceding the operation, of twenty, twenty-five, thirty, thirty-five and nearly forty years, promptly and permanently relieved by this method. I recall a case of so-called "catarrh" in which one ear had been wholly "out of use" for about twenty years before the rapid, almost total loss of hearing on the other side; in this case the operation afforded relief to the long abandoned ear at once, and to such a degree that it, exclusively, has since been used, and satisfactorily depended upon, by the patient for telephone communication and in his social and commercial intercourse.

In another case of marked deafness, where, the patient stated, "that for ten years, he was at times so dizzy that he had no rest, day or night," entire relief of this symptom was afforded by the operation; and his hearing was so far restored, that he can hear every ordinary sound satisfactorily—for instance, the tick of a clock in his room, which, before operation, he could not hear, unless close to his ear, he can now hear plainly from across the room, even when lying down.

Another patient, who claimed to have had his ear affliction for about thirty years, with ringing noises in his head and ear, and dizziness so severe, at times, as to compel his clinging to something fixed for support, and who stated, that, to the best of his recollection, "he had never been able to hear a sound of any kind from his affected ear"—this patient was relieved at once by the operation, and can "hear plainly," can also "hear as well as anyone through a telephone," and can "even hear a

whisper, or a watch tick, in the ear operated upon."

In one case recently operated upon, the hearing upon the opposite side was so markedly improved by the operation upon the worse ear, that, within four hours afterwards, the tick of a watch was heard, which had previously been inaudible for about six months.

In other cases of this character, where the deafness, dizziness and head noises had persisted for from twenty to thirty-three years or longer, I have seen radical relief afforded from the subjective symptoms, and entirely satisfactory hearing restored, not only for ordinary conversation, music, telephony, etc., but made reliable for long distances—twenty-five feet or more—as, in one case, where, before operation, shouting voice only at several feet distance, was all that could be heard.

It would be useless, here, further to enumerate details or multiply illustrations. If such are desired, I should be pleased to furnish them, upon request, in reports of cases, made before representative medical societies.

I am well aware that there are otologists who appear to have given up the operation on the middle-ear structures in chronic deafness from "catarrh," disappointed in their results. Without presuming to speculate upon the reasons for their misfortune, I can only regret, that their practical experience has not proved as encouraging as my own. A moment's reflection, however, will serve to show how irrational it is to condemn a potent agent, such as this, as harmful or useless, simply because of results, however lamentable or disappointing in themselves, arising from the indiscriminate or inappropriate employment of such agent. Particularly, since propriety and reason affirm of this, as of every other resource, whatsoever, that its value lies, not only in its application, but in its proper application. And where, occasionally, we meet with marked instances of the undoubtedly advantageous application of a remedy, obviously so beneficent as this one, failure or disappointment should but strengthen our determination to perfect the search for the exact indications for its employment.

These, as far as known, I have tried to state, and to explain to you.

In conclusion, I would modestly express the hope, that this paper may serve to direct the attention of some sympathetic hearer—one more professional brother, to the resection of the auditory conducting mechanism, as a method of radical relief for hopeless cases of deafness and discharge from the ear—whose merits certainly entitle it to more careful consideration than it appears hitherto to have been shown by the medical profession generally. And I thank you for your kind attention.

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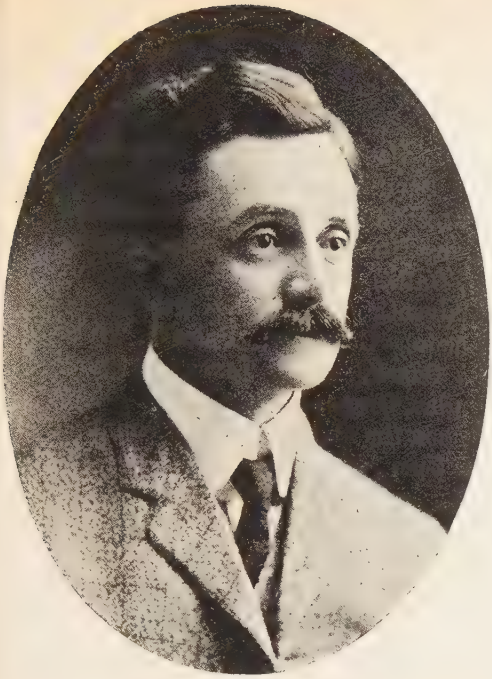
RAY COUNTY—C. B. Shotwell, M. D., Richmond.
REYNOLDS COUNTY—T. W. Chilton, M. D., Corridon.
SALINE COUNTY—D. E. Bell, M. D., Marshall.
ST. CLAIR COUNTY—E. D. Miles, M. D., Osceola.
ST. LOUIS—T. A. Hopkins, M. D., St. Louis.
ST. LOUIS COUNTY—H. G. Wyer, M. D., Kirkwood.
SCHUYLER COUNTY—H. E. Gerwig, M. D., Downing.
SCOTLAND COUNTY—O. F. Pile, M. D., Memphis.
SHELBY COUNTY—L. W. Dallas, M. D., Hunnewell.
STODDARD COUNTY—O. F. Pile, Memphis.
SULLIVAN COUNTY—G. S. Milnes, M. D., Milan.

EDITORIAL.

JUDICIAL COUNCIL.

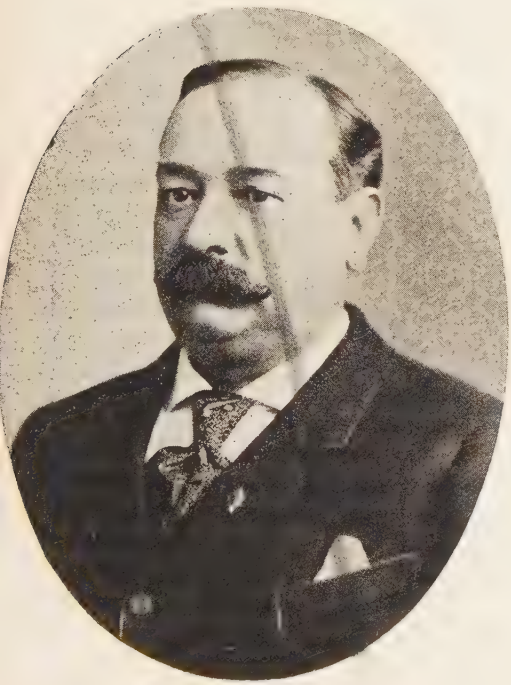
During the developmental stage of the Missouri State Medical Association no officials are of greater importance than members of the Judicial Council, half-tones of whom may be found in this issue. The state has been divided into sixteen districts. This division refers neither to the political nor geographical districts, but to sixteen groups of counties arranged with reference to accessibilty. Over each of these a councillor presides, and upon him devolves the duty of organizing and maintaining organization in each of the counties.

The gentlemen have accomplished during the past six months eight times more than during the corre-



DR. FRANK B. HILLER, Kahoka.
Councillor First District.

DR. J. B. BRUMMALL, Salisbury.
Councillor Second District.



DR. E. H. MILLER, Fayetteville.
Councillor Third District.

DR. C. H. WALLACE, St. Joseph.
Councillor Fourth District.

sponding months of last year, and at this time ten new counties are about to be organized. The total membership of the State Association is 1,520, and with the counties to be organized during the next three weeks will be over 1,700. With the total of sixty-three counties organized and a membership of 1,520 the councillors are to be congratulated. Much work is yet to be done, as is shown by the following table, giving the unorganized counties in each councillor's district:

First District.—Dr. F. B. Hiller. Counties: Adair, Knox, Lewis.

Second District.—Dr. J. B. Brummall. Solidly organized.

Third District.—Dr. E. H. Miller. Counties: Clinton, DeKalk, Gentry, Harrison, Worth.

Fourth District.—Dr. C. H. Wallace. County: Andrew.

Fifth District.—Dr. L. W. Dallas. Solidly organized.

Sixth District.—Dr. Woodson Moss. Counties: Montgomery, Warren, Pike.

Seventh District.—Dr. W. B. Dorsett. Counties: St. Charles, Lincoln.

Eighth District.—Dr. F. J. Lutz. Counties: Franklin, Gasconade.

Ninth District.—Dr. B. M. Hypes. Counties: St. Genevieve, Cape Girardeau, Perry.

Tenth District.—Dr. J. J. Norwine. Counties: Scott, New Madrid, Bollinger, Dunklin, Center, Ripley, Jefferson, Washington, Francois.

Eleventh District. — Dr. W. S. Allee. County: Osage.

Twelfth District.—Dr. R. D. Haire. Counties: Lafayette, Benton.

Thirteenth District.—Dr. M. P. Overholser. Solidly organized.

Fourteenth District. — Dr. A. R. Snyder. Counties: Barry, Lawrence, Dade, Barton, Cedar, Vernon.

Fifteenth District. — Counties: Hickory, Stone, Taney Greene, Christian, Dallas, Polk.

Sixteenth District. — Dr. R. L. Johnson. Counties: Pulaski, Webster, Ozark, Dent, Texas, Wright, Douglas, Oregon.

When the above fifty-four counties have been fully organized the medical profession in Missouri will be in position to dictate legislation.

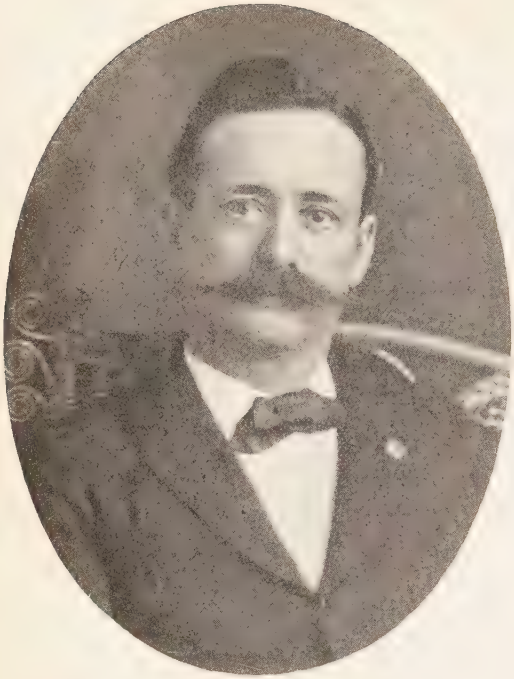
At the last annual meeting the council decided to publish the transactions of the association in journal form instead of the bound volume, and as a result the work of organization has been much simplified. Heretofore many members of the profession living in remote districts inaccessible to the meeting place have felt there was comparatively little to be gained by membership in the State Association, but since the advent of the *Journal*, in which they receive not only the transactions of the State Association but articles or abstracts of articles from the pens of the best known men in the medical world, they realize that something is received in return for the dues they are expected to pay. Never has the medical profession of Missouri been so nearly organized as today. Never have the State Association and county societies been in so healty a condition as today. As soon as the *Journal* is self supporting it seems probable Missouri will follow the lead of other states and protect members in cases of malpractice suits. Then we may expect every physician in the state who is eligible to become a part of the State Association, when our

Dr. L. W. DALLAS, Hunnewell.
Councillor Fifth District.

Dr. WOODSON MOSS, Columbia.
Councillor Sixth District.

Dr. W. B. DORSETT, St. Louis.
Councillor Seventh District.

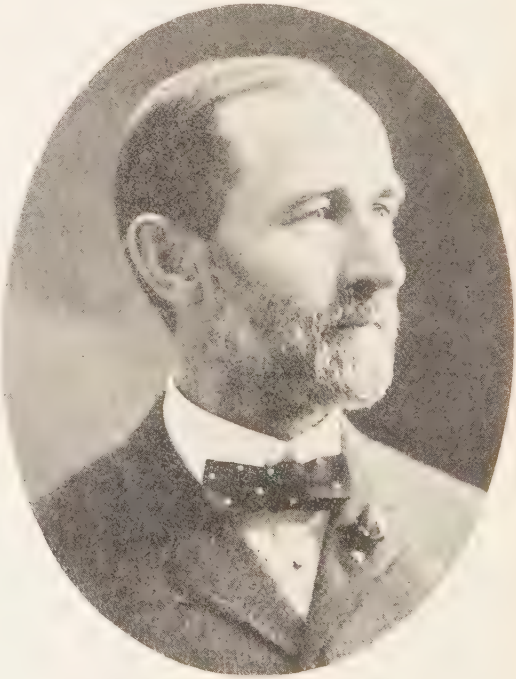
Dr. B. M. HYPES, St. Louis.
Councillor Ninth District.



DR. J. J. NORWINE, Poplar Bluff.
Councillor Tenth District.

DR. I. A. MARSHALL, Ironton.
Assistant Councillor Tenth District.

DR. W. S. ALLEE, Olean.
Councillor Eleventh District.



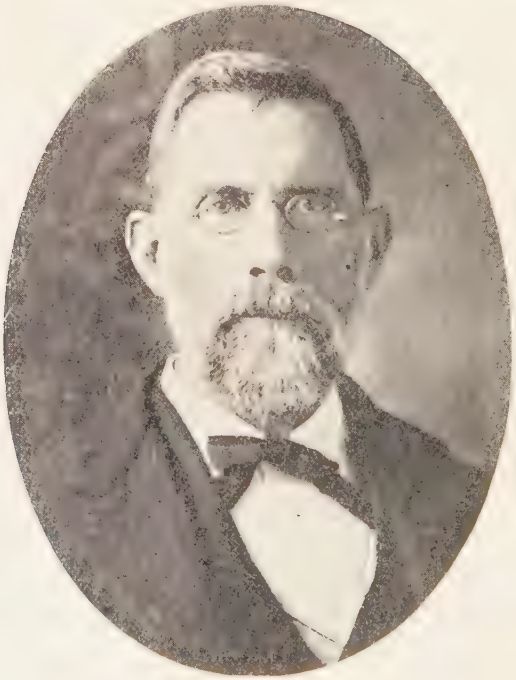
DR. R. D. HAIRE, Clinton.
Councillor Twelfth District.

membership should reach 5,000. The following new members have been added since the last annual meeting:

E. A. Lyle, Butler.
E. G. Zey, Butler.
R. F. Hulett, Rich Hill.
Ross Grosshart, Rockville.
E. N. Chastain, Rich Hill.
V. J. Cumpton, Pleasant Gap.
G. A. Delameter, Rich Hill.
C. B. McNarry, Rockville.
W. H. Knott, Hume.
H. W. Lancaster, Rich Hill.
H. A. Rhoades, Foster.
W. H. Allen, Rich Hill.
J. S. Amyx, Amsterdam.
F. R. Atkins, Greenville.
W. S. Bailey, Leeper.
I. N. Barnett, Piedmont.
G. W. Toney, Piedmont.
J. E. Gilmer, Piedmont.
J. L. McGhee, Williamsville.
J. M. Montgomery, Lowndes.
R. J. Owens, Mill Spring.
J. P. Sebastain, Patterson.
C. C. Sheets, Greenville.
L. M. Pettit, Greenville.
J. Q. Adams, Bellview.
C. L. Blanks, Pilot Knob.
David Clarkson, Annapolis.
R. W. Gay, Ironton.
C. C. Kerlagon, Bellview.
Ira A. Marshall, Ironton.
E. L. Barnhouse, Ironton.
C. A. Anthony, Fredericktown.
E. P. Cozzens, Fredericktown.
C. U. Davis, Fredericktown.
G. L. Dines, Mine Lamothe.
G. W. Greenwood, Fredericktown.
O. Haley, Fredericktown.
J. H. Renfroe, Fredericktown.
J. T. Coffee, Steelville.
Walter S. Cox, Cuba.
Wm. J. Bamber, Wilson Mills.
W. A. Metcalf, Steelville.
Clarence Metlock, Steelville.
A. H. Horn, Steelville.
C. C. A. Herzog, Cuba.
T. B. Turnbaugh, Bloomfield.
T. B. Wingo, Dexter.
D. R. Corbin, Bloomfield.
S. H. Evans, Bloomfield.
T. C. Allen, Bernie.
H. S. Winters, Acorn Ridge.
A. D. Hill, Dexter.
Elden Phillips, Bloomfield.
L. S. Mayfield, Puxico.
L. Burris, Puxico.
J. H. Bilbrey, Puxico.
J. P. Brandon, Essex.
W. C. Caldwell, Essex.
John Ashley, Bloomfield.
J. A. Tiller, Leora.
E. A. P. Briney, Bloomfield.
G. W. Vernon, Dexter.
J. D. Moulder, Puxico.
Harry La Rue, Dexter.
—— Slayden, Dexter.
A. R. A. Davis, Bloomfield.
John H. Douglas, Dexter.
R. L. Evans, Boonville.
R. S. Holman, Boonville.
P. L. Hurt, Boonville.
Jerome D. Potts, Boonville.
F. R. Smiley, Boonville.
F. G. Dinwiddie, Camden Point.
H. I. Owen, Fulton.
E. E. Brunner, Fulton.
J. W. Berry, Reform.
Eli Wilson, Leora.
B. J. Cline, Ardeola.
M. S. Winters, Asherville.
Wm. J. Chandler, South Orange, N. J.
W. A. Berry, Unionville.
Ida M. Nulton, Livonia.
Geo. W. Tremaine, Tavern.
Roy Whaley, Browning.
D. L. Whaley, Browning.
T. J. Downing, New London.

Dr. M. P. OVERHOLSER, Harrisonville.
Councillor Thirteenth District.

Dr. A. R. SNYDER, Joplin.
Councillor Fourteenth District.



Dr. R. L. JOHNSON, Rolla.
Councillor Sixteenth District.

M. H. Rhoads, Austin.
Jno. B. Brierly, Gum City.
Martin Dalton, Fenton.
John R. Lionberger, Boonville.
O. B. Hicklin, New London.
W. G. Hendrix, New London.
S. Ragan, New London.
Wm. Wates, New London.
Wm. Birney, Oakwood.
W. S. Harwood, Rensselaer.
Chas. H. Graves, Center.
R. W. McCullum, Center.
F. M. Wicks, Center.
R. E. Suter, Perry.
F. Walters, Perry.
R. M. Winn, Saverton.
G. M. Bristow, Princeton.
Chas. R. Buren, Princeton.
H. P. Chesmore, Princeton.
C. C. Copeland, Mill Grove.
I. L. Davis, Granger.
John E. Parrish, Memphis.
A. H. Mackey, Gorin.
L. M. Coffey, Hitt.

THE COUNTY SOCIETIES.

Upon the organization and perpetuation of a county society in all or nearly all the counties of the state rests the standing of our profession at home and abroad. We are succeeding reasonably well. Out of the one hundred and fifteen counties in the state we have about sixty-five county societies. There are a few counties in which it will be years before we can hope to have any organization. I have had some little experience in helping to organize some of the societies. As a rule it is not very difficult to get a sufficient number of physicians together to organize a society. The vital question is, how to make them of the highest value and interest to their members. I confess that I cannot answer this question. I feel some plan must be adopted which will demonstrate to the public that the member of a medical society is of greater value and service to them than the man on the outside. Whenever the public shall begin to ask if a physician is a member of a society before they engage him as their family physician, then the sailing will be more sure. The railroads and other corporations are beginning to ask this question of those applying for positions with them. Whenever an outsider wants an endorsement for some position, he invariably goes to a member of some society for his endorsements. If the same party is sued for malpractice he flees at once to the members of the medical society as his house of refuge. Should this protection be extended to a man who persistently ignores the medical organization? But what can we do for the men who want societies and are now members of such organization? I was present last week at a newly organized society, and there was a goodly attendance of good men, and the question upon every lip was: What can we do to make the society draw and live? We are up against this question in our own county, and we are by no means over-sanguine of success. Our plan is to meet once a month in different parts of our county. A certain number of the society most conveniently located make it their duty to be present. The sessions are, as far as possible, clinical. The regular profession of that section are requested to bring as many cases before the society as they can get to come, each case being accompanied with a written clinical history, this his-

tory to be filed with the secretary of the society. Frequently there is a social feature in the way of a dinner, which adds greatly to the ties that bind us. We are now considering the advisability of occasional joint meetings of contiguous county societies. I think it would be profitable to have in our journal occasional short articles by men who are actually engaged in this work in the counties of the state. I have no doubt some one has a better plan than ours, and we want to get hold of it. Brethren, let your light shine through the columns of *your* journal. WOODSON MOSS.

THE MICROCHEMICAL PROPERTIES OF BLOOD CELLS.

Normally the protoplasm of a red blood corpuscle is of a basic or alkaline reaction, and, therefore, has a normal fixed affinity for acid stains. A normal red corpuscle will, therefore, take the acid stains, eosin, acid fuchsin, orange G, &c. Because of this normal selective affinity of the red corpuscle for acid stains it is called an acidophile. By reason of the fact, also, that a normal red corpuscle has no affinity either for basic or neutral stains, but only for acid stains, its staining properties are said to be monochromatophilic, and for this reason it is called a monochromatophil.

In using Ehrlich's tri-acid mixture in the study of the microchemical properties of blood cells we find in some abnormal red corpuscles that parts of the protoplasm of the corpuscle may take the basic stain and are colored blue, other parts the neutral stain and are colored purple, and others the acid stain and are colored orange, while still other parts may select no stain whatever, remaining colorless. Such abnormal red corpuscles are said to be polychromatic in their staining properties, and are called polychromatophiles. In some conditions of the system this polychromatic staining of the red corpuscles is found to consist of a number of blue basic granules in a background of a normal orange-colored red corpuscle. These granular basophilia are an evidence of small areas of degeneration disseminated throughout the protoplasm of the red corpuscle, and the condition is frequently spoken of as the punctate basic degeneration of the erythrocytes. It is found in the high grades of anæmia, especially in the blood of patients suffering from lead poisoning.

Abnormal red corpuscles which stain with a basic nucleus, are called blasts, as microblasts, normoblasts, and megaloblasts, depending upon the size of the nucleated corpuscles. These blastic corpuscles are found in grave anæmias, especially in pernicious anæmia.

In the study of the microchemical properties of the normal white blood corpuscles we find that the single nucleated leucocytes take nothing but the basic part of Ehrlich's tri-acid mixture, and are, therefore, colored blue. The protoplasm of the nucleus, however, is more markedly basic than any other part of the corpuscle, and is, therefore, stained a deeper blue than the rim of protoplasm which surrounds it. As there are no granules found in the protoplasm which surrounds the nucleus of these corpuscles, they are called non-granular leucocytes. Both the small mononu-

clear and the large mononuclear leucocytes of the blood are found by a study of their microchemical properties to be non-granular basophiles.

By staining the polynuclear leucocyte we find that its various parts have a normal affinity for most all of the stains contained in Ehrlich's triacid mixture. The nuclei take the basic stain and are colored blue, the granules take the neutral stain and are colored purple, while the protoplasm surrounding the granules may partake slightly of the acid stain. By reason of the fact that the granules found in the protoplasm surrounding the nucleus take the neutral stain, they are called neutrophiles. The polynuclear white corpuscles of the blood are, therefore, frequently called the granular neutrophilic leucocytes, or simply the neutrophiles. The small percentage of polynuclear leucocytes of the blood which contain granules, having a great affinity for the acid stain eosin, are called eosinophilic leucocytes.

Abnormal leucocytes of the blood are those which have only one nucleus and contain granules which are either neutrophilic, acidophilic, or basophilic, or several of these varieties of granules may be found in the same leucocyte. These abnormal corpuscles are called myelocytes. Thus we can have the neutrophilic myelocyte, the acidophilic or eosinophilic myelocyte, and the mixed myelocyte. The presence of the myelocyte is characteristic of the disease spleno-myelogenous leukemia. In this blood disease it is the neutrophilic myeloctye, which is usually the most abundant.

Thus, by means of stains scientifically applied to properly prepared blood films and the use of the microscope, we can observe and study what are called the microchemical properties of blood cells. Abnormal microchemical properties of the cells of the blood, as revealed by these methods of examination, are frequently of the greatest diagnostic import.

M. P. O.

ATTENTION TO DETAIL.

In the routine work of physicians the small elements which exist in a given case are neither sufficiently appreciated nor made use of as they should be, especially as regards diagnosis, prognosis and treatment. The habit of superficiality is easily acquired as one's practice increases in size, but it is often the result of improper training in the medical college. The greatest men in the profession are those who are endowed with the faculty of investigating beneath the surface. Osler's great skill as a teacher and diagnostician depends as much as anything upon his ability to dig out the minor points in a case, put them together in one great whole, and thus obtain a clear clinical practice. A disabled piece of machinery often receives a more critical going-over than many of the sickest patients. Attention to detail is all-important in surgical work. Epidemics of wound infliction occur occasionally in the best managed hospitals, and it is frequently difficult to find the cause. However, these infections can usually be traced to ignorance on the part of new nurses, of the numerous details which should be observed in acquiring perfect asepsis. There is nothing in the science of medicine so small that it may safely be over-

looked. The faculty of observing and of making use of the little things in medicine should be more fully developed. L. A. T.

OBITUARY.

George Newton Lantz, M. D., president of Linn County Medical Society, died at his home in Brookfield September 2d. Dr. Lantz graduated from the medical department of the University of Louisville in 1890, since which time he has practiced in Brookfield. He was a charter member of the North Missouri Medical Association and for several years secretary of that organization. Up to June, 1904, he was a member of the Executive Council. He never missed a meeting of the association until, in June of the present year, his health became so poor he was unable to attend. He was at one time secretary of the Grand River Medical Society, and later, president. Few have taken more active interest in or worked harder for the good of medical organization. Dr. Lantz was a member of the American Medical Association.

GEORGE NEWTON LANTZ.

NEWS ITEMS.

New Orleans is to be the site of a hospital built by the United States government for Panama canal patients.

Capt. Salvatore Pizzati, New Orleans, has given $250,000 as the nucleus of a fund for the establishment of a hospital for Italians in New Orleans.

In New York City a novel step has been taken in the combating of tuberculosis. It is endeavored to enlist the school children, numbering one-half million, in the anti-spitting crusade. As an educative measure it is a good one, and will undoubtedly be conducive of good in more ways than one.

The St. Joseph's Orphan Society, a charitable organization of Jefferson City, has given all its assets, amounting to $2,298, to the new hospital of the Sisters of St. Mary, now being erected at Jefferson City, at a cost of $75,000.

Sorrentino says that the almost constant enlargement of the organ during the first part of the second stage of syphilis, may serve as a means of diagnosis when other symptoms are lacking. Morfan considers syphilis to be the chief cause of enlargement of the spleen in infancy, even more than in rickets. He had found it in about 50 per cent. of cases of congenital syphilis. Carpenter considers syphilis comes next to rickets as a cause of splenomegaly.

New statutes, just issued in Russia, place women doctors on practically the same footing, both with regard to education and practice, as their male rivals. Women may now obtain diplomas, pursuing their studies for medical degrees in the universities of the country and in the Military Medical Academy. But the law restricts Jewish students to 3 per cent.

At the conclusion of the regular meeting of the board of health, Commissioner Darlington announced on September 7th that the following amendment had been made to the sanitary code, to be known as section 66a: "No phenol, commonly known as carbolic acid, shall be sold at retail by any person in the city of New York, except on a prescription of a physician, when in a stronger solution than 5 per cent."

Wm. H. Arthur, as a result of his experience at the Soldiers' Home, tells us that old men are much better surgical subjects than is usually supposed. He operated on twenty-two patients, averaging seventy years of age, with recovery in all except one, a hopeless case of gangrene. We need not hesitate to operate on old men, he holds, for their chances of recovery are fairly good. The administration of anæsthetics to 586 old men, operated on in fourteen years, without any death, shows that the aged can take ether well.

Specifications for fire escapes, standpipes and safety elevators for

the proposed addition to Mercy Hospital, Denver, are being prepared. According to the new ordinance passed after the Iroquois Theatre disaster in Chicago, the plans for all new hospitals must be submitted to the building inspector for determination of the facilities for fighting fires and removing helpless patients to places of safety. At least two specially constructed hospital stairways or elevators will be required at opposite ends of the structure, which is to be from four to five stories in height. There will be three or four large standpipes and a number of ordinary fire escapes.

It is becoming apparent that typhoid fever is spread from person to person by diverse and more direct routes than by infected water and milk.

One of the means by which typhoid fever may be spread is that of the human skin. Wigura found upon the hands of hospital attendants in the typhoid wards, bacillus coli and bacillus typhi. C. E. A. Winslow, of the Massachusetts Institute of Technology, recently examined the hands of a number of persons, including employes of the Institute and pupils of one of the schools of Boston, and reports finding the bacillus coli upon the hands of ten out of one hundred and eleven persons examined. These results indicate how readily the typhoid bacillus may be transmitted by the hands of those affected with the disease or of their non-professional attendants.

The idea is prevalent that marriages between persons too closely related results in progeny feeble in mind and body; but the facts do not always seem to bear out this theory. The first restrictions of marriages between persons within certain degrees of consanguinity, seem to have been made by Moses. Abraham married his half-sister, while his brother Nahor wedded a niece; Jacob married two sisters, Rachel and Leah, who were his cousins; Esau also married a cousin, while Judah took as his wife the widow of his own son; and Moses' father, Amram, married Jochebed, a paternal aunt.

Among the ancients, many of those noted for their physicial and mental attainments, were the offspring of consanguineous marriages. Cleopatra, for instance, the most beautiful and fascinating of sovereigns, was the daughter of a brother and sister, and a great-great granddaughter of Bernice, who married a man who was her half-brother as well as her husband. Cleopatra married a younger brother.

There are certain facts connected with bichloride of mercury as an antiseptic, which, while commonplace, are often forgotten; some of them are here noted. It is very corrosive upon all metals and incompatible with all alkalies and alkaline earths, while the salt in watery solution has a restraining action upon the bacteria in as small a proportion as 1.50000. In contact with blood, pus, sputum or albuminous substances, this power is greatly reduced. In strengths of 1.1000 non-spore bearing bacteria are killed by mercuric chloride in less than a minute, but anthrax and some other spore bearing forms survive for an hour or more. The staphylococcus pyogenes (found in abscesses and on

the skin), although non-spore bearing, is very resistant against solutions of corrosive sublimate.

Common salt lowers the germicidal power of bichloride of mercury; so likewise does alcohol. Bichloride of mercury has no antiseptic power when mixed with oil. Solutions of bichloride of mercury should always be made up with soft water (distilled preferred).

In "Russky Vrach" is related the case of a woman, who, to support her uterus, introduced into her vagina a croquet ball. The improvement obtained by this support was so great that she left it in place for thirty years! Finally, on account of the irritation it produced, it became necessary to remove the ball, and the extraction of it was a good deal more difficult than the insertion.

The Norwegian authorities, who do not make light of the subject of alcoholism, have conceived an original method of curing drunkards of their vice. The "patient" is placed in a room, which he is forbidden to leave, and all outside communication is cut off. When he is once under lock and key, his nourishment consists in great part of bread soaked in port wine. The first day the drunkard eats his food with pleasure, and even on the second day he enjoys it. On the third day he finds that it is always about the same thing, and on the fourth day becomes impatient, and at the end of eight days he received the wine with horror. It seems that the disgust persists and that this homœopathic cure gives unexpected results.

According to the South Carolina newspapers, they are taking effective action regarding certain "patent medicines" that it might be well for other states to follow. Probably it is because South Carolina, through its dispensary law, controls the sale of alcoholic liquors that it is able to do what it seems to be doing. One paper speaks of drug stores being prohibited from selling peruna on account of the alcohol it contains, and that hereafter it can be had only on the prescription of a physician. Another shows that it is not only peruna that is barred, but Hostetter's Bitters, DeWitt's Stomach Bitters, and some others less known because less advertised. According to the state chemist's analysis, Hostetter's Bitters contains 41.3 per cent., DeWitt's Stomach Bitters 37.6 per cent., and Peruna 26 per cent. of alcohol, and consequently are to be classified as intoxicants.

Among the noted medical men from abroad who were speakers at the International Congress of Arts and Science at St. Louis may be mentioned Dr. Ronald Ross, Liverpool; Dr. Shibasaburo Kitasato, Tokio, Japan, and Dr. Theodore Escherich, Vienna. Dr. Ross, the great authority on malaria, will visit Panama and Jamaica before returning to Europe.

At the thirtieth annual meeting of the Mississippi Valley Medical Association, held at Cincinnati, O., October 11-13, the following officers were elected:

President—Bransford Lewis, M. D., St. Louis.

First Vice-President—Frank Parsons Norbury, M. D., Jacksonville, Illinois.

Second Vice-President—J. H. Carstens, M. D., Detroit, Michigan.

Secretary—Henry Enos Tuley, M. D., Louisville, Kentucky.

Assistant Secretary—John F. Barnhill, M. D., Indianapolis, Indiana.

Treasurer—S. C. Stanton, M. D., Chicago, Illinois.

Next place of meeting, Indianapolis, Indiana, October, 1905.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

SEVENTEENTH ANNUAL MEETING HELD AT ST. LOUIS, SEPT. 13–16, 1904.

Under the presidency of Dr. Walter B. Dorsett, St. Louis.

Addresses of welcome were delivered on behalf of the St. Louis Obstetrical and Gynecological Society by Dr. Louis E. Newman, and on behalf of the city and the Exposition, by David R. Francis, president of the Louisiana Purchase Exposition. The responses to these addresses of welcome were made by Dr. L. H. Dunning, Indianapolis, and Dr. Herman E. Hayd, Buffalo, New York. The meeting was very well attended. The papers were of a high scientific character, and the discussions on them full and spirited. The association held only one session a day, in the morning, thus giving the members and their guests an opportunity to visit the Exposition in the afternoons and evenings.

Officers for the Ensuing Year.—The following officers were elected for the ensuing year: President, Dr. H. W. Longyear, Detroit; Vice-Presidents, Dr. D. Tod Gilliam, Columbus, Ohio, and Dr. John Young Brown, St. Louis; Secretary, Dr. William Warren Potter, Buffalo, New York (re-elected; Treasurer, Dr. X. O. Werder, Pittsburg (re-elected).

The association will meet in New York city in 1905.

ABSTRACTS.

Reed Memorial.—The sanitarians who are to clean up Panama have sailed for Colon, and within a year, it is expected, the isthmus will be fit for Americans to live in. Here again, as in Havana, when we undertook similar work, the scourge especially to be conquered is yellow fever, but in the five years since the United States assumed the temporary care of Cuba our health authorities have found the means of destroying this dreadful disease, and what was thought an impossibility before the Spanish war is now only a matter of comparatively little time. It is particularly fitting, then, that efforts should be making now to raise an appropriate memorial to the late Dr. Walter Reed, who, major and surgeon in the United States army, sent to Cuba as chairman of a board of experts to study yellow fever, demonstrated the methods by which the pestilence can be controled. Dr. Reed died in Washington in Novem-

ber, 1902, having just completed the most remarkable and startling series of experiments in the annals of American Medicine. By proving beyond question the previously supposititious theory that the fever was conveyed from one person to another in the same way as malaria germs were spread, and showing that the only measure of protection necessary was the complete isolation of an infected patient by means of mosquito netting, he made a discovery to be compared with inoculation, perhaps to supplant and supersede that ancient practice of Turkish origin. The physicians at the recent meeting of the American Medical Association in Atlantic City subscribed $8,000 of the $25,000 desired for the statue of Dr. Reed it is proposed to erect in the capital, and the remaining $17,000 should be not slowly forthcoming when the purpose for which it is desired becomes more widely known. —*Boston Transcript.*

Diet List for Constipation.—Plain diet in the usual manner, eating the usual quantity of foods presented and using the variety allowed in the list.

Breakfast.—Cereal with cream, preferably cornmeal or rye and oats; two soft-boiled or scrambled eggs; bread, preferably black bread or pumpernickel, or rye bread with much butter; fruit, apples or grapes.

Dinner.—Soup, preferably vegetable soup; fish or meat or both, with salad; vegetables, at least two kinds, preferably spinach, cabbage, beets, turnips, potatoes, beans or peas, if desired; dessert of rice or bread pudding or custard, including daily a saucer of prunes.

Supper.—Bread and butter; cocoa; cold meat and vegetable salad; dessert of stewed fruit, apples or pears or figs; if necessary include a saucer of prunes.

Drink at least three pints of water daily.—*Practical Medicine Series*, May, 1904.

Koch Still Adheres to His Theory.—According to recent reports, Professor Koch is not at all disturbed by the decision reached by the British Royal Commission on the subject of bovine and human tuberculosis. When this was published he was absent from Berlin, but on his return he said that he saw no reason for modifying his views, and declared again emphatically his conviction that the transmission of bovine tuberculosis to man cannot take place by means of food. Neither bovine flesh nor milk, he asserts, can transfer the disease. It is possible for a butcher at the slaughter house to become infected by injuring himself when handling tuberculous meat, but even then the infection remains local. It causes a local sore, but no general disease. The report of the royal commission, Professor Koch says, does not contain a single fact to make him change his opinion, which is based on very careful experiments, not only by himself, but by other medical men of the highest standing. It is for his opponents, he says, to prove that he is wrong. He has tried for years to find a case in which tuberculosis was transferred from animals to men. Three years ago the Prussian minister for public instruction, at his request, instructed all physicians in charge of the large public hospitals

to report all cases which came to their notice of bovine tuberculosis transmitted to man, and up to this day he is waiting to hear of the first case. "Veterinary surgeons say that five per cent. of all cows have bovine tuberculosis, yet the royal commission," says Professor Koch, "cannot state a case of a man being infected by drinking the milk of such cows. How many millions are wasted by the killing of animals, the flesh of which is said to be dangerous, and for the sterilization and pasteurization of milk, which loses many of its good qualities in the process? If all these millions were spent on really practical means for combating tuberculosis, one might get the mastery over it." — *The Cincinnati Lancet Clinic.*

International Congress of Medicine.— We have received the first number of the *Journal of the Fifteenth International Congress of Medicine*, that will take place in Lisbon on the 19th–26th of April, 1906. This number contains the statute of the congress, the organization of the sections and of the national committees of the different nations. One must remark in the statute the second article, that only admits in the congress, beyond the doctors, the scientific men presented by the national or Portuguese committees. The contribution is of 25 francs or 20 marks or £1. The work of the congress is distributed in seventeen sections: 1. Anatomy (descriptive and compared anatomy, anthropology, embryology, histology). 2. Physiology. 3. General pathology, bacteriology and pathological anatomy. 4. Therapie and pharmacology. 5. Medicine. 6. Pediatry. 7. Neurology, psychiatry and criminal anthropology. 8. Dermatology and syphilography. 9. Surgery. 10. Medicine and surgery of the urinary organs. 11. Ophthalmology. 12. Laryngology, rhinology and stomatology. 13. Obstetrics and gynecology. 14. Hygiene and epidemiology. 15. Military medicine. 16. Legal medicine. 17. Colonial and naval medicine,

The executive committee of the congress has the intention to print, before the reunion, all the official reports; it is necessary that they shall be given before the 30th of September, 1905, to the general secretary. For the free communications it is necessary that they should be given before the 31st of December, 1905, if the authors want that the conclusions should be printed before the opening of the congress.

The official language is the French. In the general assemblies, as in the sections, English, German and French may be used. We see that the committee of the congress has excluded the Portuguese from the languages permitted. This has only been done with the intention of diminishing the number of languages spoken; there can be no jealousy when the legislator begins by sacrificing himself.

The president of the committee on organization is the Doctor M. da Costa Alemao; the general secretary is the Doctor Miguel Bombarda. All the adhesions (*sic*) must be addressed to this doctor (Hospital de Rilhafolles, Lisbon). — *California State Journal of Medicine.*

Theories of Immunity.—Cappellani's investigation concerns itself with the question as to the mode of action of preventive and curative serums, such as diphtheria antitoxines, *i. e.*, whether these substances act simply in view of certain antibodies contained in them, or as a result of their influence upon the cells of the body, in which they stimulate the production of antitoxic and antibacterial agents. Cappelletti found that when diphtheria bacilli are inoculated into guinea pigs previously immunized with diphtheria antitoxine, the growth of germs obtained is not a normal one, but in the shape of deformed, elongated and branched rods. This anomalous growth of bacilli was not due directly to the influence of antitoxine, as was proved by experiments in test tubes, with cultures of the bacillus grown after the addition of antitoxine to the culture medium. The bacilli grown thus did not show any morphological changes.

Guinea pigs were then immunized against diphtheria, and bladders of collodion filled with broth cultures of diphtheria bacilli were then introduced into their peritoneal cavities. The bacilli in these cultures showed the branching and the other changes described, and if the germs were allowed to remain in these bladders long enough, they lost their power of reproduction. These changes did not occur in normal guinea pigs, unless the cultures were kept in them for over a month. This is explained by the fact that with the diphtheria culture there was introduced a certain amount of diphtheria toxine, which in time immunized the normal pig.

The changes in the diphtheria bacillus in these experiments were due, the author thinks, to the influence of antibodies circulating in the animal, and which were formed there under the action of the antitoxine. These antibodies are specific, because experiments with the introduction of other germs than Lœffler's bacillus into animals immunized against diphtheria produced negative results.

According to these researches, therefore, the immunity conferred by an antitoxine introduced into an animal is not a passive one, as Ehrlich called it, for the serum causes the development of antibodies in the immunized organism. Metchnikoff's theory of phagocytosis does not hold good in these cases, as the bacteria were separated from all direct cellular influence by the collodion membranes.—*New York Medical Journal.*

Tap Filters Harmful.—Dr. S. A. B. —Ordinary tap filters are far from a protection against water infection; boiling the water is a much safer procedure. Perhaps we can do no better than quote from a recent issue of the *Chicago Bulletin of Health* on this subject:

"The common tap filters are not only worthless, but are actually harmful, because they do not stop any of the bacteria, only the organic matter, such as animal and vegetable detritus. Now, when the water is shut off, a few bacteria remaining upon this animal matter find it to be a suitable food, and, as a result, they increase enormously in numbers, so that the next water drawn through the tap filter washes them out, and the longer such a filter is used the more bacteria are found in the water which it fil-

ters. Stone or porcelain filters are of value, but only if properly cleaned. During the first few hours such a filter is used, the bacteria, being so small, pass through the pores of the filter. These pores finally become clogged with bacteria. Then, after a few hours, depending upon the pressure, the water will be free from bacteria, but after a day or so the bacteria grow through the filter, and the water is again contaminated. Therefore, the first water coming from such a filter should be rejected, and the filter itself should be boiled and thoroughly cleaned every two or three days.—*Merck's Archives.*

Influence of Skin Grafting on the Recurrence of Morbid Growths.—Campbell, writing to the *British Medical Journal* of February 13, 1904, refers to the influence of skin grafting on the recurrence of morbid growths as follows: In case of lupus, if the affected skin be excised and skin grafting of the raw surface be employed, there is no tendency for the disease to recur, whereas, if the wound be stitched up, there is a marked tendency to the formation of tuberculous nodules in the stitch holes and scar. The same observation applies to keloid scars. There is also reason to believe that skin grafting exercises an inhibitory influence on the skin. The author has not yet been able to satisfy himself that carcinomata are affected in the same way.—*The Therapeutic Gazette.*

Position of the Human Stomach—The former teaching that the lowest part of the stomach is formed by the greater curvature was founded upon observations on the cadaver, and is not now generally received. The writer, extending his researches upon the digestive movements from animals to man, has confirmed the modern view by the x-rays. From the shadow cast by a normal human stomach containing food with bismuth subnitrate, it can be seen that as digestion proceeds the longitudinal and oblique muscular fibers contract, and lift up the organ toward the fixed cardiac orifice; hence, in the later stages, the pylorus is the lowest point, and, when it opens, the fluid will pass out of the stomach by gravity.—W. B. Cannon, in *American Journal of Physiology*, February, 1904.

Malarial Fever in Suez.—Pressat states that the fever was brought to Suez by the Greek and Italian laborers on the canal, the necessary mosquito and fresh water shortly preceding them when Ismaila was built for the early canal constructors. The fever in this town has been completely stamped out by pouring a mixture of crude and refined petroleum on every pool of stagnant water, however small, once a week, and by the free distribution of quinine and arsenical solutions for prophylactic purposes. Three grains of quinine sulphate were administered every morning to each workman, and this amount was found to be absolutely protective against an army of wicked anopheles.—*New York Medical Journal.*

A Study of the Tubercle Bacilli Isolated from Three Cases of Tuberculosis of the Mesenteric Lymph Nodes.—Theobald Smith states that the bacilli

from these three cases of presumable food infection do not correspond to the bovine type of bacilli in any one particular. They were readily cultivated from nearly all the guinea-pigs inoculated, and they grew luxuriantly from the start on dog's serum. Morphologically the bacilli were either fairly long, *i. e.*, they averaged about two microbes in length, or else they were very variable, polymorphic. The uniformly short, straight forms of the bovine type were absent. In all cases the bacilli were of a very low order of virulence, lower even than that of many of the cultures of human origin studied before. None presented the reaction curve of true bovine bacilli. The writer concludes by saying that we have as yet no satisfactory evidence concerning the degree of change, if any, which tubercle bacilli of bovine type may undergo in the human body. He believes that it is at present quite inconceivable that changes could be as thoroughgoing as would be the case if we were inclined to attribute these cases of infection by way of the digestive tract to milk. He believes that we must refer them to infection with bacilli of strictly human origin.—*Medical Record.*

The Japanese Red Cross is a striking illustration of the scientific foresight and organized care the government gives to the health of its people. In a recent number of *The Outlook*, George Kennan describes the marvelous perfection of this branch of the service. Six or seven years before the first Red Cross association was organized in the United State, and long before Japan became a party to the Geneva convention, she acknowledged and carried into execution the fundamental principle of Red Cross work—the impartial treatment of all wounded belligerents in time of war. Today the Russian wounded and dead are cared for by the Japanese soldier, who an hour before may have done the wounding, as well as his own brother in arms. The Red Cross is indeed now a part of the government's own military establishment, although deriving its support from the people and within limits managing its own affairs. In 1896 it had 201,011 members, received from them $270,000, besides 292,277 other gifts. Kennan says that on January 1, 1904, the Japanese Red Cross had ready for immediate work, 14 chief surgeons, 277 ordinary surgeons, 45 pharmacists, 1,920 trained nurses, 457 probationary nurses, 763 stretcher bearers and male attendants.

In the shape of material resources and relief stores, it had 4 hospital steamers, 398 cases of surgical instruments, 496 stretchers, 52,438 suits of clothing for sick or wounded patients, 27,199 suits of clothing for nurses, and a great quantity of bedding, cots, tents, medicines and other supplies for field and hospital work. In short, it was prepared to take the field at once, in a war of the first class, with abundant resources, with a highly trained and competent force of surgeons and nurses, and with a most complete and up-to-date equipment. Compare this—but no, we will not!—*American Medicine.*

Vitality of Germs of Diphtheria for a Long Time.—A health officer in Mecosta county reports to the secretary

of the Michigan State Board of Health that twenty years ago Mrs. T. lost a daughter by death from diphtheria, and then some of the girl's clothing was put away in a chest and nailed up. The chest was not disturbed until this spring, when the mother, seventy-five years of age, opened it and looked over the clothing, soon after which she was taken sick with diphtheria and died, June 17, 1904. The health officer believes she contracted the disease from the clothing, infected twenty years ago.—*Virginia Medical Semi-Monthly.*

Sanitation and the Panama Canal.—It has been said that as many as 50,000 men lost their lives by disease during the French attempt to dig the Panama Canal. It is evident that the United States will go about the job in a better way, and is already taking steps to avoid such a scandal. Surgeon-Major Edie, whose experience at Manila should enable him to judge intelligently, has studied the sanitary problem for our government, and Colonel Black, described as "the man who cleaned up Havana," has made a sanitary survey of the canal zone. Comfort is said to be derived from the fact that there will be little upturning of new earth, only extending deeper the cuts already begun, etc., but is there really any scientific basis for the belief that new diggings in the earth liberate the causes of disease and greatly increase the death rate? Everything points to the necessity of a strict military control of the sanitary conditions and lives of the workmen. Today the inhabitants of Panama, although in a tropical country, close their windows at night and sleep in a fetid atmosphere, because of the fear of malaria, thus reducing vitality and increasing the chances of many terminal diseases. They have not learned the role of the mosquito, and the workmen must be instructed in this and in the use of pure water, etc., as if they were children. More than that, they must be compelled to practise those hygienic precautions which we now know prevent disease. The French cared nothing for these things, and their failure was largely due to the immoral neglect. Practical morality, in fact, is the prevention of disease, the subordination of the financial and stock-broking elements to those of a higher order can only insure the construction of the canal without the reckless waste of life and money formerly exemplified. This is emphasized by Dr. C. A. Stephens (*Youth's Companion*), who says, as a result of the French neglect of these sanitary measures, there was a direct loss of about 70,000,000 francs: "The indirect loss from delay and demoralization can never be determined. Such a premium does nature set on the health protection of laborers at Panama. Almost any sum, the expenditure of $5,000,000, indeed, in an up-to-date system of health protection will return to the government threefold before the canal is completed. It will prove the best of all economic investments." — *American Medicine.*

The Money Waste of Typhoid Fever.—Dr. Vaughn of the University of Michigan, in a recent address, entitled "Water Supply of Cities," says:

"There die in this country every year from typhoid fever alone not less

than fifty thousand people. There are sick in this country not less than five hundred thousand people from the same cause. To get down to dollars and cents, which is the American way of figuring everything, say that the average human life is worth a thousand dollars. Then with fifty thousand deaths from this disease, we are losing by death alone fifty millions of dollars. But there are five hundred thousand people sick. Then we will say that the time of each one of these individuals is worth a dollar a day. Besides that there must be at least one nurse, and we will suppose that these services are worth one dollar a day. Then for each day that those five hundred thousand people are sick, the people of the United States are paying one million dollars. And forty days is certainly an average duration for typhoid fever. Then with this forty millions and the fifty millions lost by death, it is interesting to note that the people of the United States are paying a tribute of ninety million doldollars to our ignorance for the existence of a disease which, if every man did his duty, would not exist at all."

In these few words Dr. Vaughn has clearly and forcibly stated facts concerning the prevalence of typhoid fever and its cost to the country. To lessen the cause of typhoid fever is more difficult than many people would suppose, but it is practical. The health officer, or health superintendent of every city ought to insist upon a thorough water analysis at least twice a month, and cities of any considerable size ought not to be allowed to have wells at all. If they exist, they should be subjected to the same regular examinations as that of the public water supplies, and if found at all suspicious, they should be immediately filled up. This would eliminate them very fast. If the same rigid rules were carried further into the country and the superintendent of health of the counties were instructed, or forced to test the purity of the water of all wells, typhoid fever would prevail a great deal less than it does. —*The Charlotte Medical Journal.*

Simulated Intestinal Perforation.—It is not very uncommon for grave conditions to be simulated, though as a rule the simulation is not so close as absolutely to defy detection. In recent French experience, however, there have occurred three cases of "false perforation" of the intestine in typhoid fever cases in which the classical symptoms and signs of perforation were pronounced, and yet nothing but intestinal hyperæmia was discovered on laparotomy. These cases are made the subject of comment by M. R. Romme in the *Presse Medicale* for August 13th, especially one reported by M. Rochard in the *Gazette des Hopitaux.*

M. Rochard was called in haste one morning to a man in M. Debove's service, who, being convalescent from typhoid fever, had been taken about three hours before with symptoms of the greatest gravity. His face had a pinched expression, his forehead was covered with cold sweat, he complained of atrocious pain in the abdomen, and he was vomiting incessantly. The temperature was below normal; the pulse was over 100, small and quick; the abdomen was

but little distended, but its muscles were contracted, and the pain, which was chiefly on the right side, was manifestly increased by pressure in the region of the cæcum. The diagnosis of perforation was made, and the abdomen was opened at once, but, although the cæcum, the vermiform appendix, the duodenum, the stomach and the gall-bladder were examined carefully, they were all found to be perfectly normal. The only abnormality discovered was exaggerated vascularization of the transverse colon. The abdomen was simply closed, and the patient made a good recovery.

M. Rochard cites the two other cases—one observed by Delorme, and the other by Alglave and Boisseau. In both of them there was the same clinical picture of perforative peritonitis. In Delorme's case only slight redness of the small intestine was found on laparotomy, and in the other case congestion with false membranes at the situation of the ileum. These two patients also recovered.

M. Rochard does not hesitate to look upon these three cases as examples of incipient peritonitis, and he imputes the gravity of the symptoms observed to the exaggerated sensibility of the peritonæum in the patients. But these questions arise: What caused the peritonitis, if such it was; and how was a simple abdominal incision curative? We know that mere abdominal section without any further procedure has often been followed by recovery in cases of tuberculous disease of the peritonæum. Are we to expect that the same operation will prove equally applicable in cases of non-perforative peritonitis occurring in patients recovering from typhoid fever? — Editorial in *New York Medical Journal.*

Quackery.—An antiquackery congress is planned by the French profession. But if they have need of it there, how much greater is the need in our country! We can surely furnish them ten quacks to their one, and their peculiar brand seems to differ radically from ours, if an illustrative story may be believed: A street dealer in nostrums was asked by the police to show his diploma, which he did, as he was a well-equipped physician. But he begged that his secret should not be given to the people, because they would have nothing to do with a man with a regular education and a diploma. We do things differently over here, for the quack, bitter against the medical profession, takes great pride in advertising himself M. D., professor or even higher types of D.'s. Our French colleagues will have no difficulty, probably, in securing the enactment of the laws they wish, as the profession is much respected in France—again a noteworthy difference from conditions here. But one may doubt if the laws there are passed whether the vogue of quackery will thereby be much lessened.—*American Medicine.*

COUNTY SOCIETY NOTES.

ST. LOUIS MEDICAL SOCIETY.

Dr. B. M. Hypes, President.
Dr. H. C. Dalton, Vice-President.
Dr, T. A. Hopkins, Recording Secretary.
Dr. H. J. Scherck, Corresponding Secretary.
Dr. R. M. King, Treasurer.

The meetings of the St. Louis Medical Society have been full of interest since the resumption after the summer's recess. The presence in our city of a host of celebrities consequent to the holding of the International Congress of Arts and Science in connection with the Fair, and consequent also to several other medical gatherings of national and international character, has made it possible for the society to hear in its halls men who have contributed largely in making modern medicine. Among the essayists from abroad we have heard Prof. Dr. W. P. Dunbar, of Hamburg, Germany, on "Observations on the Cause and Treatment of Hay Fever;" Prof. Dr. A. Wasserman, of Berlin, Germany, on "Immunity and Serum Therapy, Principally with Reference to the Origin of Antibodies;" Prof. Kachici Mitsakuri, of the Japanese Imperial University at Tokio, who spoke on "Medical Education in Japan;" Prof. Dr. Otto Cohnheim, of Heidelberg, and Dr. Braeger, of Berlin. The addresses of Drs. Dunbar and Wasserman were exceptional in their scientific worth, while that of Prof. Mitsakuri was entertaining and instructive in the extreme, giving, as the Professor did, just the information we wished of the requirements and regulations of practice and the general condition of the profession in Japan.

Among the American authorities to whom it has been our privilege to listen were Dr. Chas. K. Mills, of Philadelphia, on "Observations on Cerebellar Tumors;" Dr. Chas. L. Dana, of New York City, on "The Psychoneuroses;" Dr. H. N. Moyer, of Chicago, on "Indications for Surgery in Injuries of the Spine Involving the Cord;" Dr. W. T. Eckley, of Chicago, on "Logical Conclusion Regarding the Function of the Accessory Sinuses in Man, Founded on their Phylogenetic Study;" Dr. Walton, of Boston; Dr. Putnam of Boston; Dr. Patrick, of Chicago; Dr. Punton, of Kansas City, and others.

The following papers have been presented by members of the society:

"Hemorrhage from the Lachrymonasal Duct from the Removal of a Stye," by Dr. J. C. Buckwalter.

"Report of a Case of Fracture of the Lower Dorsal Vertebra with Paraplegia; Operation; Recovery with Partial Restoration of Function," by Dr. M. W. Hoge.

"Surgical Aspects of Dr. Hoge's Case," by Dr. H. G. Mudd.

Dr. Buckwalter presented a patient showing exposure of the temporal lobe of the brain, the result of atrophy of the petro-mastoid bone by cholestestoma.

Dr. N. N. B. Carson presented three specimens—

(1) Complete resection of the bladder behind the prostate.

(2) Resection of the pyloric end of

the stomach and five inches of the colon for cancer.

(3) Complete excision of the sternum in a child two and one-half years old for sarcoma.

The society is called upon to mourn the death of Dr. T. F. Prewitt, which occurred at his residence, 4917 Berlin avenue, on October 17th. Dr. Prewitt was at one time president of the society and has been so long a promiment character in professional and medical educational matters that his name is familiar throughout the country. A more extended tribute to his memory appears in another column. The society was officially represented at Dr. Prewitt's funeral by Drs. McPheters, Funkhouser, King, Kieffer, Newman, P. G. Robinson, Dorsett and W. G. Moore who were appointed pallbearers for the society.

At its meeting on October 1st the following physicians were elected to associate membership:

Dr. W. E. Leighton, 3339 Lucas avenue.

Dr. F. A. Schulte, 2447 North Spring avenue.

Dr. C. D. Cobb, 2900 Washington avenue.

Dr. Ben. Shanklin, 2734 Chouteau avenue.

The subject of meeting place, which has for several years been periodically agitated, had again been considered by the society and this time has been brought to consummation of evident need. The society voted at its meeting, October 15th, to meet in the small hall of the Y. M. C. A. building. This hall is capable of seating 350 persons, is centrally located and its adoption will, it is believed, contribute largely in increasing the attendance at the meetings.

T. A. Hopkins, M. D.

STODDARD COUNTY MEDICAL SOCIETY.

Dr. T. B. Turnbaugh, President.
Dr. T. B. Wingo, Vice-President.
Dr. D. R. Corbin, Secretary.

The Stoddard County Medical Society met in regular session at Dexter September 2, President Turnbaugh in the chair. Owing to much sickness in the county the attendance was small. Papers on "Prescription Writing for Alcoholics" were read by Drs. Turnbaugh and Douglass. Stoddard is a local option county. Dr. Turnbaugh, recognizing that promiscuous writing for whiskey is wrong, would not, however, advise a ruling which would prevent writing a prescription for whiskey when necessary. Dr. Douglass pointed out the great value of alcohol in practice, but could see no reasonable excuse for prescribing a pint of whiskey at a dose, and he very forciby denounced promiscuous writing of whiskey prescriptions, which brand the physician as a mere parasite attached to the whiskey-vending drug store. Dr. Corbin, in discussion, stated that he had written for whiskey, but had had his confidence abused, and would favor an agreement by the society prohibiting the writing of such prescriptions. Dr. Hill would never write a prescription for whiskey, being firmly of the opinion that whiskey has no place in medicine. Dr. Vernon thinks whiskey valuable, but a not absolutely necessary remedy. Neither Dr. Klein nor Dr. LaRue keep whiskey at their

respective drug stores. Dr. Allen believes that whiskey has no place in medicine. After an extended discussion of the subject, the society voted to vigorously prosecute the illegal writing of illegal whiskey prescriptions as well as the filling of them. The proper officers of the society were ordered to prosecute certain illegal practitioners and midwives in the county. Drs. Hill, Turnbaugh and Slayden were named a committee to prepare resolutions on the death of Dr. Jackson. The society adjourned to meet at Bloomfield the first Wednesday in December.

T. C. Allen, Reporter.

MONITEAU COUNTY MEDICAL SOCIETY.

Dr. J. B. Stewart, President.
Dr. J. M. Robertson, Vice-President.
Dr. J. B. Norman, Secretary.
Dr. H. C. Klueber, Treasurer.
Dr. J. B. Norman, Delegate.

The Moniteau County Medical Society met in regular quarterly session in Latham September 8th, President J. B. Stewart in the chair. The subject of illegal practice of medicine was taken up and thoroughly discussed, a committee of three, Drs. H. W. Latham, S. H. Redmon and J. B. Burke, being appointed to investigate the matter and, if necessary, to bring action against any whom they might find to be illegally practicing medicine within the county. Dr. W. R. Patterson read a paper on "Hydrotherapy." Clinics were held by Drs. H. W. Latham, W. H. Elliott and J. M. Robinson. After a general discussion of the "Treatment of Typhoid Fever," the society adjourned to meet in California, Mo., the second Tuesday in December, at which time will be held the election of officers for the next year. A banquet will follow the election. Drs. J. B. Stewart, J. B. Norman and H. C. Klueber constitue the committee on arrangements.

W. R. Patterson, Reporter.

CHARITON COUNTY MEDICAL SOCIETY.

Dr. M. B. Austin, President.
Dr. Harry Tatum, Vice-President.
Dr. C. A. Jennings, Secretary-Treasurer.
Dr. J. D. Brummall, Delegate.

The Chariton County Medical Society held its regular monthly session in the office of J. Franklin Welch, at Salisbury, Thursday, September 29th, Dr. M. B. Austin presiding. The minutes of the August meeting were read and approved. Visiting physicians present were Drs. Dameron, Jarvis and Epperly. Dr. C. H. Temple presented a clinic: man, white, married, forty-five years of age. At seven years of age he suffered traumatic injury to the penis. Ejaculations have ever given him great pain. Drs. Dameron, Epperly and Welch were made a committee to examine the case and report. They reported it to be a case for circumcision.

Dr. C. H. Temple read his paper on "Proprietary Medicines."

The paper met with most hearty approval. Dr. Kirkpatrick's paper on "Inflammatory Rheumatism" is to be read at the next meeting. The society adjourned to meet the last Thursday in October.

L. A. Bazan, Acting Reporter.

ST. LOUIS COUNTY MEDICAL SOCIETY.

Dr. R. D. Moore, President.
Dr. Howard Carter, Vice-President.
Dr. H. G. Wyer, Secretary.
Dr. N. N. Jensen, Treasurer.
Dr. W. H. Wyer, Delegate.

The last meeting of the St. Louis County Medical Society was held at Clayton on September 14th. Lunch was served, followed by the regular business meeting. The secretary was elected reporter for the remainder of the year. Drs. R. C. Forsythe, of Kirkwood, and R. B. Denny, of Eureka, were elected to membership. Dr. F. C. Ewing spoke at length on the "so-called hay-fever" and Dunbar's serum. The society then adjourned till October 12th.

H. G. Wyer, Reporter.

BUCHANAN COUNTY MEDICAL SOCIETY.

Dr. W. T. Elam, President.
Dr. J. B. Reynolds, Vice-President.
Dr. J. J. Ransbach, Treasurer.
Dr. O. B. Campbell, Delegate.
Dr. Chas. Wood Fassett, Secretary.

The Buchanan County Medical Society met in regular session October 7th. A considerable portion of the meeting was taken up in discussions upon the report of the committee which had been instructed to frame a fee bill. Each item was considered separately, and the bill as a whole will be adopted at the next meeting. In order to increase attendance at the society meetings two amendments to the by-laws were passed as follows: First, Whenever any officer (including censors) absents himself from the society for three consecutive meetings, unless satisfactory excuses can be given, his position will be considered vacant, and his successor will be elected at once. Second, Members of the Buchanan County Medical Society absenting themselves from two-thirds of the meetings during the year, or from four consecutive meetings during the time, shall forfeit their right to vote upon any question before the society or upon the election of officers unless unavoidably detained by personal sickness or sickness in their family or by absence from the city. The following resolution also met the approval of the society: That in the future, after an applicant has been passed upon by the censors in the usual way, he shall be reported back to the society to be voted upon at the following meeting, his name meanwhile being sent to each member of the society upon the regular society announcement cards, which are distributed by the secretary. At the next meeting the question of pure milk will be considered. Dr. Gray will prepare a paper on "The Need for Milk Legislation in St. Joseph."

L. A. Todd, Reporter.

HOLT COUNTY MEDICAL SOCIETY.

At the fourth quarterly meeting of the Holt County Medical Society in Forest City, on the 4th inst., the following papers were read: "Heredity," Dr. T. O. Davies, Maitland; "Mumps," Dr. J. F. Chandler, Forest City; "Syphilis," Dr. B. T. Inigley, Mound City. Dr. F. E. Bullock, of Forest City, presented a pathological specimen of dermoid cyst, with a very interesting report of the case. Dr. J. M. Davis, of Craig, reported a

very unusual case of appendicitis. Dr. T. O. Davis reported two very interesting cases. The discussions which followed were very enthusiastic and to the point. There is promise that the next regular meeting at Maitland, January 3, 1905, will be the greatest in the history of the society.

J. F. CHANDLER, Reporter.

ST. CLAIR COUNTY MEDICAL SOCIETY.

Dr. W. Cline, President.
Dr. W. B. Pringrey, Vice President.
Dr. E. D. Miles, Secretary.
Dr. John Seevers, Treasurer.

The St. Clair County Medical Society met in regular session in Osceola Tuesday, September 13th, Dr. Cline presiding. The attendance was good. Interest in the society is growing throughout the county. Two new members were voted into the society. Papers were read on "Curability of Tuberculosis" and "Prescribing and Dispensing," after which all repaired to the annual banquet, which was enjoyed to the utmost.

E. D. MILES, Reporter.

RALLS COUNTY MEDICAL SOCIETY.

Dr. O. B. Hicklin, President.
Dr. T. J. Downing, Secretary.

The physicians of Ralls county met, by request of Dr. L. W. Dallas, councillor for fifth district, in New London, October 10th, and organized the Ralls County Medical Society, with twelve members, as follows: Drs. McCullum, Birney, Harwood, Hicklin, Ragan, Graves, Hendrix, Downing, Suter, Walter, Wicks and Winn. They will meet at Perry in January, New London in April, Spalding Springs in July and Center in October. Inasmuch as there are but fourteen physicians in the county, the relative membership of this new society is the best in the state, speaking volumes for the intelligence of the physicians of Ralls county. That they are earnest in their desire to reap the benefits of organization is evident. Dr. Dallas writes: "I was delayed in reaching New London at the hour agreed upon, and when I arrived found the organization almost completed. This is mentioned to show that the doctors are in earnest, and will go on regardless of obstacles. They passed resolutions, adopted the state and county constitutions and made application for charter." The fifth district is now solidly organized, for which Dr. L. W. Dallas deserves much credit.

PLATTE COUNTY MEDICAL SOCIETY.

Dr. A. S. Herndon, President.
Dr. R. P. Davis, Vice-President.
Dr. G. C. Coffey, Secretary,
Dr. J. A. Baldwin, Treasurer.
Dr. S. Reidman, Delegate.

The regular monthly meeting of the Platte County Medical Society was held in Platte City Wednesday, October 5th, Dr. Herndon, presiding. The minutes of the previous meeting were read and approved. Dr. J. W. Winn read a paper on "Hydrophobia," reporting therein a case occurring in his practice. Death resulted about three weeks after the dog bite, in spite of all that could be done, not excluding the application of a so-called mad stone. The doctor believes there is no special value in the mad stone beyond the mental effect produced.

Dr. Barr, in discussion, stated that from a case carefully studied by him he is of opinion that the symptoms are much exaggerated by the mental attitude of the patient, and that the mad stone or anything else which serves to control the hypersensitive imagination is of value in so far as it exercises such control. Dr. Barr presented a very interesting case, a boy who fell on a pitchfork, which penetrated the right external auditory meatus. There resulted right facial paralysis and inco-ordination in walking. After liberal discussion of the salient features of this case the society adjourned to meet in Platte City November 2d.

GRUNDY C. COFFEY, Reporter.

COOPER COUNTY MEDICAL SOCIETY.

Cooper County Medical Society met pursuant to adjournment at the office of Dr. P. L. Hurt, President J. D. Potts in the chair. Drs. Moss, Meyer, Noyes of Columbia and V. Q. Bonham of New Franklin, being present, were invited to take part in the discussion. The minutes of the previous meeting were read and approved. Dr. Moss presented a very interesting case of obscure tumor in the abdominal wall two inches to the right of median line and about midway between the umbilicus and the ensiform cartilage. Dr. Hurt presented a case of senile cataract for consideration. Dr. J. D. Potts read a paper on pneumonia and typhoid fever, advancing somewhat novel methods of treatment. He took the ground that pneumonia was simply a local manifestation of a general toxæmia, and that as such it should be treated by withdrawal of toxine-loaded blood and the injection of an equal quantity of sterile normal saline solution. This paper was discussed by Drs. Moss and others. Upon motion Dr. P. S. Williams, of Bunceton, was nominated and elected delegate to the state association. Papers for our next meeting will be read by Drs. Smiley and Holman on subjects of their own selection. The society, with guests, took dinner at Wagner's. There being no further business, the society adjourned to meet on the first Tuesday in November at Dr. Hurt's office.

R. L. EVANS, Reporter.

CALDWELL COUNTY MEDICAL SOCIETY.

Dr. C. C. Leeper, President.
Dr. B. F. Carr, Vice-President.
Dr. Tinsley Brown, Secretary-Treasurer.
Dr. G. B. Cowley, Reporter.

The Caldwell County Medical Society met in regular quarterly session at Cowgill on Wednesday, October 5th, Dr. C. C. Leeper presiding. Dr. J. O. Wilkerson, of Cowgill, was elected a member. Dr. Herman E. Pearse, of Kansas City, presented a paper on "The Surgical Treatment of Tuberculosis of the Kidney," with several interesting specimens. The paper was generally discussed and approved, and a vote of thanks was tendered to Dr. Pearse for the same. Dr. G. B. Cowley, of Cowgill, read a paper on "Labor and the Puerperal Period," and Dr. B. F. Carr, of Polo, a paper on "The Treatment of Inevitable Abortion," both of which elicited lively discussions, participated in by nearly all members present. The next meeting will be held at

Braymer, on the first Wednesday in January, 1905.

G. B. Cowley, Reporter.

PUTNAM COUNTY MEDICAL SOCIETY.

Dr. C. H. Carrier, President.
Dr. J. A. Townsend, Secretary.
Dr. A. D. Ellis, Treasurer.
Dr. L. L. Gray, Delegate.

The Putnam County Medical Society met in regular session September 7th, President Carryer in the chair. Dr. L. L. Cozad, of Lucerne, graduate of St. Louis P. & S., 1903, elected to membership. Report of a case of labor, with retained placenta, by Dr. J. E. McCutchen, was followed by liberal discussion. A paper entitled "Urinalysis," by Dr. J. H. Holman, was read. Discussion of this paper was postponed until next meeting.

J. A. Townsend, Reporter.

MARION COUNTY MEDICAL SOCIETY.

Dr. J. S. Howell, President.
Dr. Richard Schmidt, Vice-President.
Dr. F. Janet Reid, Secretary-Treasurer.
Dr. Thomas Chowning, Delegate.

The Marion County Medical Society held its regular meeting at the office of Dr. E. S. Hornback, in Hannibal, Dr. Howell in the chair. A most interesting paper on "Empyema" was read by Dr. E. H. Bounds, who presented a clinical case, girl nine years old, who, in January last, recovered from an attack of "grip-pneumonia," right side, only to have later a pleural effusion of the same side. Resection of portions of the seventh and eighth ribs with well-established and long-continued drainage resulted in recovery with good expansion. A lively discussion of means to awaken interest in the society followed, after which the society adjourned.

H. L. Banks, Reporter.

BOOK REVIEWS.

A Text Book of Alkaloidal Therapeutics, Being a Condensed Resume of All Available Literature on the Subject of the Active Principles Added to the Personal Experience of the Authors. By W. F. Waugh, M. D., and W. C. Abbott, M. D., with the collaboration of E. M. Epstein, M. D. The Clinic Publishing Co., Chicago, 1904. On the title page appears the following: "The Smallest Possible Quantity of the Best Obtainable Means to Produce a Desired Therapeutic Result." This motto gives us the essence of alkaloidal therapy, a new form of medication, the principles of which are set forth in the book now before us.

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A Manual of Experimental Physiology for Students of Medicine. By Winfield S. Hall, Ph. D., M. D. (Leipsic), Professor of Physiology, Northwestern University Medical School; Professor of Physiology, Wesley Hospital School for Nurses; Lecturer on the Physiology of Exercise, Institute and Training School, Chicago. With eighty-nine illustrations and a colored plate. Lea Brothers & Co., 1904. This little volume seems admirably adapted for the purpose for which it is intended—viz., as a student's laboratory manual. It is the outcome of a decade of accumulated experience in the presentation of experimental physiology to medical students, the exercises having undergone annual revision by the author, who has ever kept in mind "the fact that his pupils were preparing for clinical practice. The experiments are carefully chosen, and arranged to involve a considerable amount of surgical work and to present to the student those fundamental facts and principles of physiology which form the basis of internal medicine."

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Although the state medical journal is rapidly superseding the "Transactions" of state medical societies, there are yet a number of states slow to adopt the journal idea. We are in receipt of the Transactions of the Iowa State Medical Society, Volume xxxii, Fifty-third Annual Session, 1904. The book contains over three hundred and seventy pages, and is neatly and substantially bound.

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The Transactions of the Seventy-first Annual Session of the Tennessee State Medical Association, 1904, comes from the press of the Southern Publishing Association, a very commendable volume.

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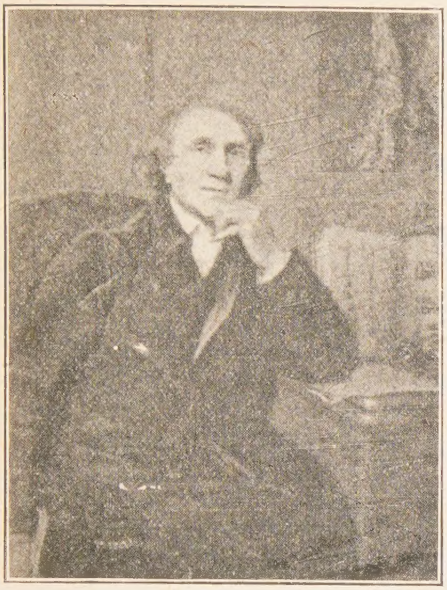
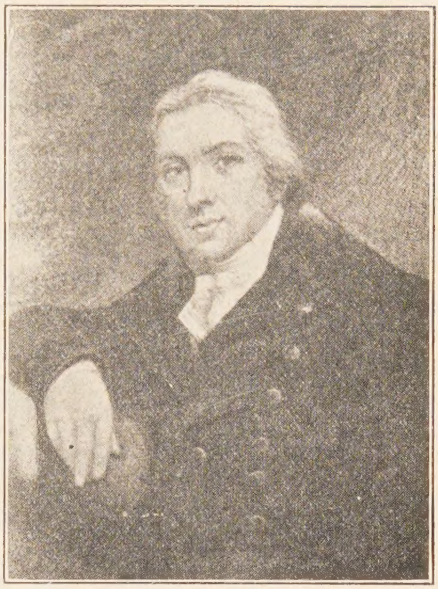
The Transactions of the Medical Society of the State of New York for the year 1904 fill a volume of over five hundred pages.

BIOGRAPHICAL SKETCHES.



JOHN HUNTER.

John Hunter, younger brother of the great surgeon, William Hunter, was born February 13, 1728, at Long Calderwood, Lanarkshire. In 1849 he attended the lectures and operations of Cheselden, and in 1750 became surgeon pupil at St. Bartholomew's. From 1764 to 1771 he practiced in London, and from the latter date to his death he carried on extensive biological researches at his place at Earl's Court. On October 16th, while pleading the cause of two prospective hospital students who had the ambition, but not the required preliminary credit for entrance to St. George's, the interruption of his remarks by a flat contradiction from one of his colleagues brought on one of his old spasmodic heart attacks; he ceased speaking and retired into an adjoining room only in time to fall lifeless into the arms of Dr. Robertson, one of the hospital physicians.



EDWARD JENNER.

Edward Jenner, favorite pupil of John Hunter, was born at Berkeley, Gloucestershire, May 17, 1749. While an apprentice at Sodburg his attention was directed to the relations between smallpox and cowpox connection with a popular belief, which he found current in Gloucestershire, as to the antagonism between these two diseases. In 1770 he communicated his thoughts in the matter to John Hunter, who replied, "Do not think; investigate." Accordingly he went to Berkeley and performed the little operation which has made his name famous. In London more than twelve thousand persons were inoculated in the first eighteen months and the deaths from smallpox, which had averaged two thousand and eighteen annually, fell in 1804 to six hundred and twenty-two. Jenner died full of fame and honor in his native place in 1823.

COUNTY SOCIETIES IN AFFILIATION WITH THE STATE MEDICAL ASSOCIATION.

COUNTY.	PRESIDENT.	ADDRESS OF PRESIDENT.	SECRETARY.	ADDRESS OF SECRETARY.
Atchison	E. E. Richards	Tarkio	A. McMichael	Rockport.
Audrain	C. T. Vernon	Mexico	C. A. Rothwell	Mexico.
Bates	A. E. Lyle	Butler	E. N. Chastain	Rich Hill.
Boone	R. S. Austin	Halsville	J. M. Fisher	Columbia.
Buchanan	W. T. Elam	St. Joseph	Chas. W. Fassett	St. Joseph.
Butler	Chas. F. Greene	Poplar Bluff	J. J. Norwine	Poplar Bluff.
Caldwell	G. W. Goins	Breckenridge	Tinsley Brown	Hamilton.
Callaway	C. H. Christian	New Bloomfield	M. Yates	Fulton.
Camden	G. M. Moore	Linn Creek	G. T. Myers	Macks Creek.
Carroll	W. C. Baird	Bogard	R. F. Cook	Carrollton.
Cass	H. Jerard	Pleasant Hill	J. S. Triplett	Harrisonville.
Chariton	M. B. Austin	Brunswick	C. A. Jennings	Salisbury.
Clark	H. W. Harris	Winchester	A. C. Bridges	Kahoka.
Clay	L. J. Jones	Linden	F. H. Matthews	Liberty.
Cole	R. E. Young	Jefferson City	G. Ettmueller	Jefferson City.
Cooper	J. D. Potts	Boonville	R. L. Evans	Boonville.
Crawford	W. A. Metcalf	Steelville	A. H. Horn	Steelville.
Current River	J. A. Chilton	VanBuren	Frank Hyde	Eminence.
Daviess	W. N. Keener	Jamesport	M. A. Smith	Gallatin.
Grundy	J. A. Asher	Trenton	W. D. Fulkerson	Trenton.
Henry	J. M. Miller	Montrose	F. M. Douglas	Clinton.
Holt	B. T. Quigley	Mound City	S. W. Aikens	Oregon.
Howard	P. C. Smith	Fayette	C. W. Watts	Fayette.
Howell	J. C. B. Dixon	West Plains	H. C. Shuttee	West Plains.
Iron	W. R. Gay	Ironton	Ira A. Marshall	Ironton.
Jackson	J. W. Kyger	Kansas City	E. L. Chambliss	Kansas City.
Jasper	R. L. Neff	Joplin	J. D. Pifer	Joplin.
Johnson	J. I. Anderson	Warrensburg	E. H. Gilbert	Warrensburg.
John T. Hogden	M. P. Overholser	Harrisonville	H. H. Rhodes	Foster.
Laclede	J. M. Billings	Lebanon	J. A. McComb	Lebanon.
Linn	G. N. Lantz	Brookfield	D. F. Howard	Brookfield.
Livingston	R. Barney	Chillicothe	H. M. Grace	Chillicothe.
McDonald	E. F. Doty	Anderson	M. L. Sellers	Anderson.
McDowell Dist	John D. Seba	Bland	J. W. Nieweg	Owensville.
Macon	W. E. Webb	Macon	G. B. Rush	Macon.
Madison	G. W. Greenwood	Fredericktown	C. U. Davis	Fredericktown.
Maries	O. C. Fritts	Lois	O. N. Schudde	Vienna.
Marion	J. S. Howell	Hannibal	F. Janet Reid	Hannibal.
Mercer	H. P. Chesmore	Princeton	C. R. Burne	Princeton.
Miller	J. W. Temple	Eldon	G. D. Walker	Eldon.
Mississippi	A. W. Chapman	Charleston	H. L. Reid	Charleston.
Moniteau	J. B. Stewart	Clarksbury	J. B. Norman	California.
Monroe	G. B. Dysart	Paris	W. B. A. McNutt	Monroe City.
Morgan	J. D. Hubbard	Versailles	J. T. Beale	Versailles.
Nodaway	J. A. Larrabee	Barnard	F. R. Anthony	Maryville.
Newton	J. W. Lamson	Neosho	Horace Bowers	Neosho.
Pettis	W. C. Overstreet	Sedalia	W. S. Shirk	Sedalia.
Phelps	W. H. Breuer	St. James	S. L. Baysinger	Rolla.
Platte	A. S. Herndon	Camden Point	G. C. Coffey	Platte City.
Putnam	C. H. Carryer	Hartford, Mo	T. A. Townsend	Unionville.
Ralls	O. B. Hickley	New London	J. D. Downing	New London.
Randolph	J. C. Ridings	Cairo	D. A. Barnhart	Huntsville.
Ray	Jas. W. Smith	Richmond	C. B. Shotwell	Richmond.
Reynolds	J. M. Lowery	Centerville	T. W. Chilton	Corridon.
Saline	D. C. Gore	Marshall	D. F. Bell	Marshall.
St. Clair	W. Cline	Appleton City	E. D. Miles	Osceola.
St. Louis	B. M. Hypes	2005 Victor St	T. A. Hopkins	Century Bldg.
St. Louis Co	R. D. Moore	Central	H. G. Wyer	Kirkwood.
Schuyler	J. T. Jones	Queen City	H. E. Gerwig	Downing.
Scotland	W. E. Alexander	Memphis	O. F. Pile	Memphis.
Shelby	Wm. Carson	Shelbyville	L. W. Dallas	Hunnewell.
Stoddard	T. B. Turnbaugh	Bloomfield	R. D. Corbin	Bloomfield.
Sullivan	J. C. Kissinger	Milan	G. S. Milnes	Milan.
Wayne	L. M. Pettit	Greenville	I. N. Barnett	Piedmont.

MEETINGS OF COUNTY MEDICAL SOCIETIES.

County.	Date of Meeting.
Atchison	Quarterly. January, April, July, October.
Audrian	Monthly. First Monday.
Bates	Quarterly. Last Thursday in Feb., May, Aug. and Nov.
Boone	Monthly. First Monday.
Buchanan	Bi-Monthly. First and Third Friday.
Butler	Monthly
Caldwell	Quarterly. July, October, January, April.
Callaway	Monthly. Second Thursday.
Camden	Quarterly. January, April, July, October.
Carroll	Monthly. Second Tuesday.
Cass	Quarterly. First Tuesday of March, June, Sept., Dec.
Chariton	Monthly. Last Thursday.
Clark	Subject to the call of the President.
Clay	Monthly. Last Monday.
Cole	Quarterly. Second Thursday of Jan., Apr., July, Oct.
Cooper	Monthly.
Crawford	Monthly.
Current River	Quarterly. August, November, February, May.
Daviess	Monthly.
Grundy	Quarterly. July, October, January, April.
Henry	Monthly. Second Tuesday.
Holt	Monthly.
Howard	Monthly. Third Tuesday.
Howell	First Thursday of November, January, March.
Iron	Monthly.
Jackson	Bi-monthly. Second and Fourth Thursday.
Jasper	Bi-monthly. First and Third Mondays.
Johnson	Quarterly. June, September, December, March.
John T. Hodgen	Quarterly. October, January, April, July.
Laclede	Bi-annual. First Mondays May and November.
Linn	Quarterly. October, January, April, July.
Livingston	Monthly. Second Thursday.
McDonald	Monthly. First Wednesday.
McDowell District	Semi-Annually. Fourth Thursday in October.
Macon	Monthly. On or before full moon, Tuesday, 10 a. m.
Madison	Monthly.
Maries	Quarterly. First Thursday of Feb., May, Aug., Nov.
Marion	onthly. First Friday.
Mercer	Monthly.
Miller	Quarterly. First Thursday. March, June, Sept., Dec.
Mississippi	Monthly. First Monday.
Moniteau	Quarterly. March, June, September, December.
Monroe	Quarterly. First Tuesday of April, July, October, Jan.
Morgan	Quarterly. First Wed. of March, June, Sept., Dec.
Newton	Monthly.
Nodaway	Monthly. Second Tuesday.
Pettis	Monthly.
Phelps	Quarterly. March, June, September, December.
Platte	Monthly. First Wednesday.
Putnam	Monthly. First Wednesday.
Ralls	Quarterly. January, April, July and October.
Randolph	Monthly.
Ray	Monthly. Third Wednesday.
Reynolds	Quarterly. January, March, June, October.
Saline	Monthly. Second Tuesday.
St. Clair	Quarterly. Second Tues, of March, June, Sept., Dec.
St. Louis	Weekly. Saturdays.
St. Louis County	Monthly. Second Wednesday.
Schuyler	Bi-monthly. July and December.
Scotland	Monthly. Second Tuesday.
Shelby	Quarterly. June, September, December, March.
Stoddard	First Wednesday in March, June, Sept. and Dec.
Sullivan	Monthly.
Wayne	Monthly.

It is believed the information in this table is correct to date of going to press. Officers are requested to notify us of any errors or required changes. For further information concerning any Society, address the Secretary.

OFFICERS MISSOURI STATE MEDICAL ASSOCIATION.

President: JABEZ N. JACKSON, Kansas City, Mo.

Vice-Presidents:

S. M. BROWN, Monroe City; H.W. LATHAM, Latham; T. M. POTTER, St. Joseph; W. S. THOMPSON, Armstrong; J. C. ROGERS, Kansas City.

Secretary: C. M. NICHOLSON, St. Louis.

Assistant Secretary: E. J. GOODWIN, St. Louis.

Treasurer: J. FRANKLIN WELSH, Salisbury.

COUNCILLOR DISTRICTS.

FIRST DISTRICT.—F. B. HILLER, Kahoka. Counties, Clark, Scotland, Schuyler, ***Adair, Knox, Lewis.***

SECOND DISTRICT.—J. B. BRUMMALL, Salisbury. Counties: Linn, Carroll, Chariton, Livingston, Grundy, Sullivan, Mercer, Putnam.

THIRD DISTRICT.—E. H. MILLER, Liberty. Counties: Clay, Ray, Platte, ***Clinton,*** Caldwell, ***DeKalb, Gentry, Harrison, Worth,*** Davies.

FOURTH DISTRICT.—C. H. WALLACE, St. Joseph. Counties: Buchanan, Holt, Atchison, Nodaway, ***Andrew.***

FIFTH DISTRICT.—L. W. DALLAS, Hunnewell. Counties: Macon, Shelby, Marion, Randolph, Monroe, Ralls.

SIXTH DISTRICT.—WOODSON MOSS, Columbia. Counties: Audrain, Callaway, ***Montgomery, Warren, Pike,*** Boone, Howard.

SEVENTH DISTRICT.—W. B. DORSETT, St. Louis. Counties: ***St. Charles,*** St. Louis, ***Lincoln.***

EIGHTH DISTRICT.—F. J. LUTZ, St. Louis. Counties: ***Franklin, Gasconade,*** Crawford.

NINTH DISTRICT.—B. M. HYPES, St. Louis. Counties: ***St. Genevieve, Cape Girardeau, Perry.***

TENTH DISTRICT.—J. J. NORWINE, Poplar Bluff. Assistant to Dr. Norwine: Dr. I. A. Marshall, Ironton. Counties: Dr. Norwine—Butler, Mississippi, ***Scott, New Madrid, Bollinger, Dunklin,*** Stoddard, ***Center, Ripley, Jefferson, Washington, Francois.*** Dr. Marshall—Iron, Reynolds, Wayne, Madison.

ELEVENTH DISTRICT.—W. S. ALLEE, Olean. Counties: Miller, Morgan, Maries, Cole. Moniteau, Camden, ***Osage.***

TWELFTH DISTRICT.—R. D. HAIRE, Clinton. Counties: Pettis, Johnson, ***Lafayette,*** Henry, St. Clair, ***Benton,*** Saline, Cooper.

THIRTEENTH DISTRICT.—M. P. OVERHOLZER, Harrisonville. Counties: Jackson, Cass, Bates.

FOURTEENTH DISTRICT.—A. R. SNYDER, Joplin. Counties: McDonald, ***Berry,*** Newton, Jasper, ***Lawrence, Dade, Barton, Cedar, Vernon.***

FIFTEENTH DISTRICT.—Counties: ***Hickory, Stone, Taney, Greene, Christian, Dallas, Polk.***

SIXTEENTH DISTRICT.—DR. R. L. JOHNSON, Rolla. Counties: Phelps, ***Pulaski,*** Laclede, ***Webster, Ozark, Dent, Texas, Wright, Douglas,*** Howell, ***Oregon.***

Counties in bold face type not yet organized.